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PARENTAL ATTITUDES TOWARD CHILD MENTAL HEALTH SERVICES: THE INFLUENCE OF ETHNICITY AND CHILD CHARACTERISTICS ON HELP-SEEKING INTENTIONS

A Dissertation

by

ERLANGER A. TURNER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2009

Major Subject: Psychology

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Approved by:

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ABSTRACT

Parental Attitudes Toward Child Mental Health Services: The Influence of Ethnicity and Child Characteristics on Help-Seeking Intentions. (December 2009)

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Help-seeking has been studied for over 20 years, but much is yet to be known about what variables influence parental help-seeking. In the present studies, participants were recruited from Texas, Mississippi, and Louisiana. Study 1, included 260 caregivers recruited from local school districts and a church. Using confirmatory factor analysis, results supported the hypothesized 3-factor structure of the *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) and internal consistency ranged from moderate to high.

Study 2 conducted subsequent analyses on the data from Study 1. Correlation analyses supported the relationships among parental attitudes, stigma, and help-seeking. Secondly, parents with previous use of child mental health services reported more positive attitudes and less stigma than parents with no previous use. Thirdly, no significant gender differences were found, but there was a trend toward parents reporting higher intentions for boys than girls. Additionally, African Americans reported less

positive attitudes and more stigma than the other ethnic groups. Finally, moderation analyses suggested that attitudes are more likely to influence help-seeking for European Americans but not for African Americans, and stigma appeared to influence help-seeking for Hispanic Americans but not for European Americans; no moderation effects were found for child gender. Finally, analyses indicated that only stigma and attitudes were significant independent predictors of help-seeking.

Study 3 was a sub-sample from Study 1 (N = 118) who completed additional measures. The purpose was to replicate findings from Study 2 and examine test-retest reliability of the PATPSI. Test-retest reliability for the PATPSI was low in this sample. Overall, results were consistent with Study 2. Results indicated that parents' with previous service use reported higher externalizing symptoms (not internalizing) than those with no previous use. Inconsistent with Study 2, Asian Americans reported less positive attitudes, and African Americans reported less stigma than European Americans and Asian Americans. Additionally, stigma tolerance was found to have a stronger influence on European Americans likelihood of future service use than for African Americans. Furthermore, the interaction between problem type and gender was not a significant predictor of likelihood of future use. Finally, only previous service use and attitudes (not stigma) were independent predictors of likelihood of future use. Implications for future research and practice are discussed.

DEDICATION

In memory of two important men who shaped my life:

Randy Turner and Richard Alexander

I wouldn't be the person I am without the values you

instilled in me to be a strong man.

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I would like to thank Drs. Heffer, Jensen Doss, Cepeda-Benito, Newman, and Liew for their guidance and support throughout the course of this research project and my graduate career. I would also like to thank other faculty members in the Department of Psychology at Texas A&M University who have assisted me in the completion of this work and have helped me grow as a clinical psychologist. I enthusiastically want to thank the members of Dr. Heffer's research team and my colleagues for their input, especially Beth Garland, Wendy Olson, Christine Limbers, and Sasha Fleary.

Last, but not least, I would like to thank my family, friends, and church for their support and prayers over the course of my academic career. I could not have done this without your continued encouragement and support. I appreciate you being there when I needed you to voice my frustrations and aspirations. Words can not express my thanks to my aunt, Patri Alexander, for her support, love, and encouragement throughout my life. You are truly my guardian angel and you will be blessed for all you have done. Thanks for everything. Te Amo mucho!

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INTRODUCTION

Studying parental help-seeking is important for several reasons. According to the National Institute of Mental Health (2004), 1 in 10 children and adolescents suffer from problems severe enough to cause some level of impairment, but only approximately 1 in 5 of those children receive treatment. This lack of service use has significant implications considering that mental health problems during childhood can lead to difficulties later in life. Research has found that untreated child psychopathology may be a risk factor for developing problems later in life such as suicide, substance abuse, involvement with the correctional system, failure to complete high school, adult psychopathology, and health problems (e.g., American Psychological Assocaition, 2006; Fergusson & Horwood, 1998; Hinshaw, 1992; Hofstra et al, 2003). In one retrospective study based on data from the NIMH Epidemiologic Catchment Area Project, childhood conduct problems before the age of 15 were associated with externalizing disorders (e.g., antisocial personality, and substance abuse) in both adult men and women (Robins & Price, 1991). In addition, the authors found that other disorders such as anxiety and affective disorders increased in prevalence as the number of childhood conduct problems increased.

To improve treatment seeking and adherence with the goal of preventing more severe behavioral and emotional problems, developing strategies to eliminate obstacles to appropriate service delivery for underserved populations is important. To develop

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This dissertation follows the style of *Journal of Clinical Child and Adolescent Psychology.*

these strategies, it is first necessary to understand what variables are important to target. The present studies aims to better understand the role of parental attitudes and child characteristics on parental help-seeking for children experiencing psychological difficulties. The theoretical basis for this work is Ajzen's Theory of Planned Behavior (1985, 1991).

Ajzen's theory of planned behavior

In the mental health help-seeking literature, several models posit pathways to service use for youth (e.g., Cauce et al., 2002; Logan & King, 2001). However, no current theoretical model has been explicitly tested. Cauce and colleagues (2002) delineated a mental health help-seeking model as a framework for understanding cultural and contextual factors that affect ethnic minority adolescents' pathways into receiving mental health services. Their model describes three identifiable stages along the help-seeking pathway: (a) problem recognition, (b) the decision to seek help, and (c) the selection of a help provider. In addition, Logan and King (2001) have proposed a parent-mediated model that describes steps a parent may take such as: (a) gaining awareness of an adolescent's distress, (b) recognizing the problems as psychological in nature, (c) considering possible courses of action, (d) developing an intention to seek mental health services, (e) making an active attempt to seek services, and (f) obtaining mental health services for/with the adolescent. Although these models (Cauce et al., 2002; Logan & King, 2001) may provide a way to understand some variables that influence a parent to seek mental health services, they neglect an important variable that likely influences parental help-seeking: specifically, attitudes that may preclude or promote help-seeking.

Eiraldi and colleagues (2006), purported that mental health stigma is also likely to have a major impact on parental decisions to seek services, especially among parents with limited knowledge about psychopathology and its treatments. As discussed below, attitudes have been found to be one of the most consistent predictors of mental health help-seeking among adults (e.g., Miller, 2004; Smith et al., 2004), so it is likely that successful theories of help-seeking for children will need to incorporate parental attitudes and mental health stigma.

One theory that holds great potential to provide a better understanding of parental help-seeking is the Theory of Planned Behavior (TPB) (Ajzen, 1985; 1991). The TPB is an extension of the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) which was developed to predict behaviors under complete volitional control. Because the TRA was not able to be well applied to understanding behaviors over which people have incomplete volitional control, Ajzen expanded the TRA into the TPB by including a persons' perceived behavioral control.

According to the TPB, the best predictor of an individual performing a behavior is their intention to do so. The TPB states that an individuals' intention to perform a given behavior is a function of three components: (a) *attitude toward the behavior,* (b) *subjective norm*, and (c) *perceived behavioral control* (see Figure B1). The first component, attitude toward the behavior, refers to the person's judgment that performing the behavior is good or bad and that he or she is in favor or against performing the behavior. The second component, subjective norm, captures the degree to which society may influence an individual to perform a behavior. Subjective norm refers to the

individual's perception about how society views performing or not performing a behavior. The third component, perceived behavioral control, refers to the individual's view about how easy or difficult performing the behavior is likely to be. As previously stated, perceived behavioral control allows for prediction of behaviors that are not under volitional control. Ajzen (1991) defines *volitional control* as the degree to which the person can decide at will to perform or not perform the behavior. Whereas some behaviors are under complete volitional control, most behaviors require some opportunities or resources (e.g., time, money) to perform them.

According to the TRA and TPB, attitudes, subjective norm, and perceived behavioral control are a function of beliefs (Ajzen, 1985; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; see Figure B1). These beliefs are termed: (a) *behavioral beliefs*- considerations of the likely positive or negative consequences of the behavior, (b) *normative beliefs*, considerations that deal with the likely approval or disapproval of a behavior by friends, family members, co-workers, and so forth, and (c) *control beliefs*- considerations about the presence or absence of variables that make performance of a behavior easier or more difficult (Ajzen & Fisbein, 2005).

The TPB allows for predictions about the likelihood of an individual performing a specific behavior because people's behavioral intentions are assumed to follow reasonably from their beliefs about performing the behavior (Ajzen & Fishbein, 2005). According to Fishbein and colleagues (Ajzen & Fishbein, 2005; Fishbein, 1979) implicit in this model are several fundamental assumptions: (a) intention is the immediate antecedent of actual behavior, (b) intention is determined by attitude toward the

behavior, subjective norm, and perceived behavioral control, (c) these determinants are a function of underlying behavioral, normative, and control beliefs, and (d) behavioral, normative, and control beliefs can vary as a function of a wide range of background factors (see Figure B1). According to the theory, background variables such as ethnicity or personality have no direct effect on behavior unless they influence the beliefs that form the basis of the behavior's attitudinal or normative determinants.

The TPB has been used extensively in the health behaviors literature (e.g., Godin & Kok, 1996; Schifter & Ajzen, 1985) to demonstrate the impact of attitudes, subjective norms, and perceived behavioral control on the intention to engage in a given behavior. For example, the TPB has been applied to predicting behaviors such as weight loss (Schifter & Ajzen, 1985), smoking cessation (Godin, Valois, Lepage, & Desharnais, 1992), and condom use (White, Terry, & Hogg, 1994). In a review on applications of the TPB, Godin and Kok (1996) found that on average intentions explained 66% of the variance in performing health related behaviors. Additionally, meta-analytic studies have found that for a wide variety of behaviors intentions have been predicted by attitudes, subjective norms, and perceived behavioral control with correlations ranging from .45-.60, .34-.42, and .35-.46, respectively (Ajzen & Fishbein, 2005).

Whereas the TPB is very important to understanding the influence of attitudes on help-seeking behaviors, the theory has yet to be tested in relation to parental help-seeking for children. The proposed study seeks to address this gap in the literature by testing part of the TPB. Specifically, the proposed study will test the relation between parental attitudes about seeking mental health services (i.e., attitude) and mental health

stigma (i.e., subjective norm) on help-seeking intentions. To facilitate this work, the proposed study also seeks to contribute to the literature by developing a measure of parental attitudes toward help-seeking.

The influence of attitudes on mental health help-seeking

The TPB has been applied to the problem of help-seeking in the adult literature to demonstrate the influence of attitudes on help-seeking intentions. Researchers have identified several variables that influence individuals to seek, resist, or avoid mental health services such as environmental constraints, affordability of services, demographic characteristics, attitudes and beliefs, and levels of distress (e.g., Cepeda-Benito & Short, 1998; Cuffell, 1997; Dubow et al., 1990). Overall, help-seeking attitudes have been a consistent predictor of help-seeking (e.g., Cepeda-Benito & Short, 1998; Mackenzie, Gekoski, & Knox, 2006; Miller, 2004; Smith et al., 2004; Vogel et al., 2007). For example, Cepeda-Benito and Short (1998) conducted a study on college students and found that attitudes toward help-seeking significantly predicted intentions to seek help for interpersonal and psychological concerns. Smith and colleagues (2004) examined if age, attitudes toward help-seeking, education, and gender were related to previous or intended mental health utilization in a rural population. To ascertain whether participants utilized mental health services in the past, they asked participants if they had ever seen a professional counselor, a psychologist, a psychiatrist, a social worker, a minister, or a family physician for a mental health concern. In addition, participants were explicitly asked whether they though they would ever seek out mental health treatment in the future. Results indicated that positive attitudes toward help-seeking, prior use of mental

health services, younger age, and female gender were related to a willingness to seek treatment in the future. The independent variables (gender, education, age, and attitudes toward help-seeking) explained 15% of the variance in prior mental health use and 28% of the variance in intended future use. Mackenzie, Gekoski, and Knox, (2006) explored age and gender differences in attitudes toward seeking professional psychological help and examined whether attitudes negatively influenced intentions to seek help among older adults. The authors sampled community adults, who completed questionnaires measuring help-seeking attitudes, psychiatric symptoms, prior help-seeking, and intentions to seek help. Older age and female gender were associated with more positive help-seeking attitudes and intentions to seek professional psychological help. Women exhibited more favorable intentions to seek help from mental health professionals than men, likely due to their positive attitudes concerning psychological openness. See Table B1 for studies on help-seeking attitudes.

When examining models of help-seeking in adults, Vogel, Wade, and Hackler (2007) tested a mediation model of willingness to seek counseling based on the TPB. The study found that attitudes explained 57% of the variance in willingness (i.e., intention) to seek help. Additionally, results indicated that in both men and women, public stigma predicted self-stigma, self-stigma predicted attitudes toward counseling, and attitudes were positively associated with willingness to seek help for psychological and interpersonal concerns. Miller (2004) explicitly testing the TPB by examining lawyers' beliefs and attitudes about their intentions to seek treatment from mental health professionals. The study found that lawyers' help-seeking attitudes and beliefs

significantly predicted their utilization of professional mental health services. In addition, Miller (2004) found that attitude toward seeking mental health, subjective norm, and perceived behavioral control explained 49%, 2.5%, and 7% of the variance in intention.

In the child literature, parental attitudes have also been shown to influence help-seeking (e.g., Daila et al., 2000; McKay, Pennington, Lynn, & McCadam, 2001). McKay and colleagues (2001) examined the impact of child, family, and environmental variables that influence initial and ongoing service usage by urban minority children and their families. The authors sampled 100 children's caregivers who requested an appointment at an urban mental health clinic. Adult caregivers requesting 1-time appointments for medication, testing services, crisis interventions, or other non-therapy services were excluded from this sample. Findings of the study indicated that parental self-efficacy and positive attitudes toward mental health services significantly correlated with child attendance at an initial intake appointment. In addition, the study found that there was a 49% decrease in the odds of attending if parents expressed skepticism reading the helpfulness of mental health care. Daila and colleagues (2000) explored racial differences in attitudes toward seeking professional care and their association with the use of mental health services in a representative sample of the United States. The study found that parental attitudes were associated with help-seeking. In addition, Zahner and Daskalakis (1997) examined variables associated with mental health service use for children in multiple settings (i.e., mental health, general health, and school-based). Using a sample of children (ages 6 to 11 years), results indicated that parental attitudinal

measure of perceived need had the strongest association with service use. Service use increased more than five-fold across all settings when a need was perceived by the parent.

Starr, Campbell, and Herrick (2002) also reported that parents are less likely to seek services due to negative perceptions or attitudes of mental health professionals. The authors sampled parents in a rural population to examine the factors affecting use of mental health services. Participants were asked to respond to the *Expectations of Mental Health Survey* (EMHS) (Richardson, 2001) which included items to address parents or guardians expectations about treatment, provider-client relationship, social and cultural variables, and accessibility of mental health services. Results indicated that 63% of the participants were concerned that mental health professionals would not care for their child and said they would feel uncomfortable talking with a mental health professional. In addition, 43% reported may not be able to trust the mental health professional.

Although limited attention has been on mothers and fathers, one study examined how parents' attitudes and service use are related in a sample of African Americans and European Americans. Using correlations, results indicated positive relationships between parents' utilization and parents' attitudes, and children's utilization and child-related attitudes (Thurston & Phares, 2008). The authors also found that parents with more positive attitudes toward treatment for themselves had similar attitudes toward treatment for their children. These findings were consistent with the mental health literature. For example, research has found that even in a high SES population parents with previous

experience using mental health services for themselves have more positive attitudes toward utilization of child mental health services (Turner & Liew, in press).

Whereas attitudes are one potential barrier to mental health services use, others have stated that the foremost barriers include the cost of care, societal stigma, and the fragmented organization of services (US Department of Health & Human Services, 2001). Additional reason why parents may not utilize mental health services includes a preference for advice from family members, friends, media "experts," religious leaders, or from self-help books and resources (Harrison et al., 2004). For example, a parent may consult with a family member or read a book on how to deal with a child that is disruptive or disobedient. See Table B1 for studies on help-seeking attitudes.

Measurement of attitudes

While these studies suggest that parental attitudes may play an important role in seeking mental health services for children, this literature is hampered by a lack of psychometrically sound measures of parental attitudes. In the adult literature, Fischer and Turner (1970) developed an attitudinal scale, the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS). The ATSPPHS assesses social variables (e.g., support from family and friends), beliefs about treatment (e.g., openness to seek psychotherapy), and the stigma surrounding mental heath care. This measure has become the gold standard for studying help-seeking attitudes in adult samples. Research using the ATSPPHS has found that negative attitudes predict intentions to seek help for a variety of psychological concerns (Cepeda-Benito et al., 1998; Vogel & Wester, 2003; Vogel, et al., 2005).

In the child literature, studies involving parental attitudes have typically relied on either single items or scales with few items to measure parents attitudes. McKay and colleagues (2001) measured parents' attitudes using questions related to external barriers taken from the Child and Adolescent Services Assessment Parent Interview (CASA). Examples from the CASA include: "are you concerned about having enough time to get help, and is it difficult for you to get to the agency?" Daila and colleagues (2000) measured attitudes using two questions. The first asked how comfortable they would feel talking about personal problems with a professional—very, somewhat, not very, or not at all comfortable; the second asked how embarrassed they would be if their friends knew they were getting professional help for an emotional problem—very, somewhat, not very, or not at all embarrassed. Zahner and Daskalakis (1997) used 3-items to measure "parental attitudes", the authors assessed parents' perceived attitude about bringing the child to care, parents' beliefs in efficacy of professional treatment, and parents' perceived attitude of family and friends about bringing their child to care. Finally, Starr and colleagues (2002) used the EMHS—developed by Richardson (2001)—which is a 37-item questionnaire to address caregivers' expectations about treatment, provider-client relationship, social and cultural variables, and accessibility of mental health services. The EMHS is composed of 4-subscales: (a) social and cultural, which measure expectation that may serve as barriers or facilitators to mental health service use (e.g., family, religious beliefs, and perceived stigma), (b) provider-client relationship, which measures beliefs parents hold about the quality of the therapeutic relationship, (c) treatment, which measures parents' beliefs about the effectiveness of mental health

interventions and the treatment process, and (d) accessibility, which refers to the ease with which parents anticipate being able to obtain mental health care (i.e., structural variable). However, the EMHS reveals low internal reliability. Internal consistencies for the 4-subscales were .62, .60, .63, and .30 (Richardson, 2001). Although it has some comprehensiveness, the measure appears to measure more structural variable than attitudinal components. Additionally, the internal consistency is low within each scale and the items may not measure similar constructs as intended. Another potential limitation of the EMHS is that the measure is administered in an interview format which takes about 20 minutes to complete. This may not be appropriate for research given it could be a time consuming procedure. Based on the review of the literature, it appears that no comprehensive, psychometrically sound measure currently exists to specifically assess parental attitudes toward seeking psychological services. With the current emphasis on improving mental health services for children, there is a need for a standardized measure to assist researchers in better studying the impact of parental attitudes on help-seeking.

Recognizing the need for a standardized comprehensive measure to assist researchers with better studying the impact of parental attitudes on mental health services use, the *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) (Turner, 2006) was developed. The PATPSI was adapted from the ATSPPHS, with items revised to be relevant to parents seeking help for their children, rather than adults seeking help for themselves. Using a convenience sample of college students, preliminary data supported a 3-factor structure of the PATPSI and 1-week test-retest

reliability. Additionally, confirmatory factor analysis (CFA) was utilized to assess the goodness of fit of the hypothesized three factor structure of the PATPSI, and fit indices suggested a good fit for the data in a convenience sample. Specifically, the RMSEA = .051, the NNFI = .94, and the CFI = .94. In addition, 1-week test-retest reliabilities were as follows for each scale: Help-Seeking Attitudes, r = .77; Help-Seeking Intentions, r = .66; Mental Health Stigma, r = .84; and PATPSI Total score, r = .82. In a sample of parents (N = 41), pilot data found that the internal consistency for the PATPSI ranged from .68 to .83 for the subscales, and .88 for the total scale (Turner & Liew, in press). The current study aims to contribute to the help-seeking literature by providing supportive evidence of the utility (i.e., psychometric data) of the PATPSI using a sample of parents, and examining variables that contribute to seeking mental health services for children.

The impact of mental health stigma on help-seeking

Over the past decade, researchers have also theorized that stigma has a significant influence on individuals' intentions to seek treatment. According to some researchers, mental health stigma or the extent to which individuals are concerned about how they or others negatively perceive those who seek mental health services may impede people from seeking services or adhering to treatments (Corrigan, 2004a, 2004b; Cauce et al., 2002). Corrigan has described two types of stigma (a) *public stigma*, the ways in which the public reacts to a group based on stigma about that group, and (b) *self-stigma*, the reactions that individuals turn against themselves because they are members of a stigmatized group.

In a sample of college students, Vogel and colleagues (2007) found that mental health stigma was associated with attitudes toward psychological services. Specifically, the authors examined the relation between public stigma (i.e., the perception held by society that an individual is socially unacceptable and often leads to negative reactions toward them), self-stigma (i.e., the perception by the individual of herself or himself as someone who is socially unacceptable), attitudes toward mental health services, and willingness to seek help. Results indicated that in both men and women, public stigma predicted self-stigma, self-stigma predicted attitudes toward counseling, and attitudes were positively associated with willingness to seek help for psychological and interpersonal concerns. As mental health stigma is consistent with the notion of subjective norm in the TPB, these findings support the prediction from the TPB that societal views about performing a given behavior (i.e., seeking mental health services) predicts help-seeking intentions. For example, parents may abstain from using mental health services to avoid their child being "labeled" or because their culture may view seeking help from a mental health provider for only severe psychological problems. Some researchers have postulated that "courtesy stigma" or stigma by association such as through kinship or by affiliation may influence help-seeking (see Goffman, 1963). Courtesy stigma has been specifically linked to individuals who have close relationships with individuals who have been diagnosed with psychological disorders such as a spouse, relative, or parent. The proposed study aims to examine the influence of mental health stigma on parental help-seeking.

The influence of child characteristics on help-seeking

Although it is clearly important to study the role of attitudes and subjective norm in parental help-seeking, research suggests that a comprehensive model of parental help-seeking should also incorporate child variables, such as child gender and problem type, that have been hypothesized to influence parental help-seeking (e.g., Weisz & Weiss,1991; Zimmerman, 2005). Weisz and Weiss (1991) found that child externalizing problems are referred significantly more than internalizing problems. The authors also noted that some of the most referred problems in youth were poor school work, fighting, disobedience, and withdrawal, and the least referred problems included obsessiveness and impulsivity. When examining gender differences in help-seeking for children, research findings generally indicate that boys are referred for treatment more than girls, however studies also report inconsistent findings. Using national survey data, Zimmerman (2005) found that girls were less likely to obtain needed treatment than boys, especially for externalizing behavior problems. Conversely, research has also found that girls with certain types of problems are more likely to receive treatment than boys (Weisz & Weiss, 1991).

Researchers have noted also that some types of symptoms and behaviors that should lead to mental health care are not always distressing to the parent, perceived by the parent as being due to a mental disorder, or seen as requiring mental health treatment (Cuffel, 1997), suggesting that there may be an attitudinal component to these problem-type and/or gender differences in help-seeking. For example, researchers have demonstrated that parents from different cultures often have varying thresholds for

differentiating normal from abnormal child behavior, and that parents are likely to seek help only after the behavior is perceived as being abnormal (Eiraldi et al., 2006). Gustafson, McNamara, and Jensen (1994) found that parents were more likely to seek mental health treatment for their children when their children's behavioral disorder was severe and when the parents had positive attitudes toward seeking treatment. The present study will build upon the existing literature by testing the relations among attitudes toward mental health, child characteristics, and help-seeking intentions. Future research may test a broader theoretical framework that integrates the TPB with the literature on other variables that impact help-seeking.

Ethnic differences in help-seeking

There are reasons to hypothesize that variables influencing mental health service use might differ by ethnicity. Ethnic difference in the use of mental health services have been documented for over 20 years. Several studies have found ethnic difference in rates of help-seeking among adults and among parents (e.g., Alvidrez, 1999; Broman, 1987; Garland et al., 2005; Gonzales, Alegria, & Prihoda, 2005; Kataoka et al., 2002; Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). Some research indicates that minority groups are more likely than European Americans to delay seeking treatment until symptoms are more severe (US Department of Health & Human Services, 2001). Overall, findings suggest that ethnic minority populations have a higher unmet need than European Americans. However, efforts to explain these differences have yielded inconsistent results. Some researchers have posited that financial inadequacies drive these differences (e.g., Dubow et al., 1990), while other studies have demonstrated that income was

unrelated to help-seeking behaviors (e.g., McMiller & Weisz, 1996). Padgett and colleagues (1994) examined ethnic differences in a national insured population and found that, even when individuals are covered by outpatient mental health insurance, a disparity exists. Results indicated that African Americans and Hispanic Americans had a lower rate of outpatient mental health use than European Americans. According to Shea and Yeh (2008), the lower rate of help-seeking among Asian Americans may stem from a combination of institutional and sociocultural barriers. Particularly, Asian Americans may perceive receiving professional help as a sign of weakness, personal immaturity, or even an indicator of hereditary flaws that shame the family (Shea & Yeh, 2008). Generally, studies in the adult literature have been mixed regarding ethnic differences in attitudes toward mental health and help-seeking, with some studies reporting that minorities (e.g., African Americans and Hispanic Americans) have more positive attitudes and are more likely to seek mental health services than European Americans (Broman, 1987; Gonzalez et al., 2005), while others find the opposite (e.g., Alvidrez, 1999).

Ethnic differences in attitudes toward mental health have received limited attention in the child literature. Diala and colleagues (2002) found that African Americans and Hispanic Americans reported more positive attitudes, but were less likely to seek services than European American parents. However, attitudes were only measured using two questions, leaving open the possibility that this study did not fully assess the range of attitudes that might explain this ethnic difference in help-seeking rates. Conversely, McMiller and Weisz (1999) found that European American parents

were more likely to seek help from professionals than African Americans or Hispanic Americans, indicating that perhaps European Americans might have more positive attitudes toward mental health services. Thurston and Phares (2008) found no racial differences in attitudes toward services for children, and that African American parents were not significantly different from Caucasian parents in child-related attitudes. They hypothesized that it is likely that parents – regardless of race – will put aside their negative attitudes when considering service utilization for their children and try to do what is best for their children regardless of their own attitudes toward mental health.

Cauce and colleagues (2002) have noted that social networks may facilitate or inhibit service selection, depending on socio-cultural norms around help-seeking behavior and attitudes. For example, some parents of African American or Hispanic American descent may prefer to seek advice from religious leaders or family members. In one study, the author stated that many African Americans appear to deny mental health problems due to a history of self reliance and mistrust of mental health providers (Snowden, 2001). Additionally, Richman, Kohn-Wood, & Willliams (2007) report that for African Americans, past discrimination and identity variables are more important than structural variables such as education or income in explaining mental health utilization. They found that racial identity was moderated the relationship between discrimination and mental health service utilization for African Americans. Given these findings, ethnicity may moderate the relation between other variables (e.g., attitudes and stigma) and help-seeking. See Table 1 for studies on help-seeking attitudes and ethnic differences.

The proposed study aims to better understand the influence of ethnicity and parental attitudes on help-seeking. By using a more comprehensive measure of attitudes toward mental health than has previously been employed in the child literature, the proposed study will provide a much more in-depth understanding of this topic than prior studies. Specifically, the current study will first assess ethnic differences in attitudes toward mental health help-seeking and mental health stigma and will examine the moderating effects of ethnicity on the relations between parental attitudes toward mental health, mental health stigma, child characteristics, and help-seeking intentions.

Purpose of the current study

Over the past 10 years, researchers have recognized the influence of mental health stigma and attitudes on the use of mental health services. To improve mental health services utilization for children, a better understanding of variables that are associated with parental help-seeking intentions is needed. Given documented ethnic disparities in the use of mental health services for children (e.g., Garland et al., 2005; Kataoka et al., 2002), the field would especially benefit from work to elucidate ethnic differences in the relation between stigma, attitudes, and help-seeking. Building on the Theory of Planned Behavior, a series of studies were conducted which aimed to contribute to the child mental health services literature in several ways.

Study 1 was conducted to validate and extend research on the psychometric properties of the *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) by examining the following hypotheses:

Hypothesis 1a: The PATPSI will demonstrate psychometrically sound factor structure.

Hypothesis 1b: The PATPSI will demonstrate adequate internal consistency.

The purpose of Study 2 was to replicate findings in the literature using a more comprehensive measure (i.e., the PATPSI). Specifically, examine potential ethnic difference in attitudes toward mental health and help-seeking intentions, examine parental differences in help-seeking for boys versus girls, and examine the influence of past child mental health service use (on parents' ratings of help-seeking attitudes, mental health stigma, and help-seeking intentions. Additionally, the study explored whether ethnicity and child gender acted as a moderator variable. Finally, the relative independent contributions of the study variables were examined. The following hypotheses were examined in Study 2:

Hypothesis 2a: Parental attitudes toward mental health services will be positively associated with help-seeking and parental ratings of mental health stigma will be negatively associated with help-seeking

Hypothesis 2b: Parents with previous experience utilizing mental health services will report differences in attitudes, stigma, and intentions than parents with no previous use

Hypothesis 2c: Parents of boys will report higher intentions to seek child mental health services than parents of girls

Hypothesis 2d: European American parents will report more favorable attitudes, lower mental health stigma, and higher intentions to seek services than African American, Asian American, and Hispanic American parents

Hypothesis 2e: Ethnicity will moderate the relation between parents' attitudes and intentions to seek mental health service

Hypothesis 2f: Ethnicity will moderate the relation between mental health stigma and intentions to seek mental health services

Exploratory analysis 2g: This study also explored whether child gender will moderate the relation between attitudes and intentions to seek mental health service, although no specific hypotheses are suggested.

Exploratory analysis 2h: This study also explored the relative contributions of previous service use, ethnicity, child gender, attitudes, and stigma on parental help-seeking intentions.

The purpose of Study 3 was to replicate and integrate the findings of Study 2 by examining the relations among parental attitudes, mental health stigma, ethnicity, child gender, problem behavior type and future use of child mental health services. Study 3 differed from Study 2 in that the current study included a Likert measure of likelihood of future child mental health service use, parental ratings of child behavior symptoms, and additional information about parents previous mental health service use. The following hypotheses were examined in Study 3:

Hypothesis 3a: Given the psychometric properties examined in Study 1, this study examined whether the PATPSI demonstrated adequate test-retest reliability.

Hypothesis 3b: Parental attitudes toward mental health services will be positively associated with future child mental health service use, parental ratings of mental health stigma tolerance will be positively associated with future child mental health service use, and past service use will be positively associated with future service use.

Hypothesis 3c: Parents' with previous use of child mental health services will report higher externalizing and internalizing child symptoms than parents with no previous service use

Hypothesis 3d: Parents of boys will report higher likelihood of future service use than parents of girls

Hypothesis 3e: Child type of behavior problem (internalizing and externalizing) will predict likelihood of future service; and child gender will interact with problem type to predict likelihood of future service use

Hypothesis 3f: European American parents will report more favorable attitudes, lower mental health stigma, and higher likelihood of future service use than African American, Asian American, and Hispanic American parents

Hypothesis 3g: Ethnicity will moderate the relation between parents' attitudes and future child mental health service use

Hypothesis 3h: Ethnicity will moderate the relation between mental health stigma and future child mental health service use

Exploratory analysis 3i: Explore whether child gender will moderate the relation between attitudes and future child mental health service use

Exploratory analysis 3j: Explore the relative contributions, in a comprehensive model, of parental attitudes, mental health stigma, ethnicity, child's gender and problem behavior type on future use of child mental health services.

STUDY 1 METHOD

Participants

Participants in the Study 1 consisted of 260 caregivers (93% female) recruited from communities in Texas (*n* = 210; 81%), Louisiana (*n* = 9; 3%), and Mississippi (*n* = 41; 16%). The ethnic distribution of caregivers for Study 1 was 44% European American, 32% African American, 15% Hispanic American, 6% Asian American and 3% unknown. The ethnic distribution of children (47% female) was 39% European American, 34% African American, 15% Hispanic American, 5% Asian American and 6 % unknown. The mean age for children was 5.11 (*SD* = 1.45). Seventeen percent of participants reported previous use of child mental health services. Information on caregivers' age, the type of service provider used in the past, and caregivers own personal mental health service use was not obtained. See Table B2 for sample characteristics.

Measures

Demographic questionnaire. Demographic information was collected from each participant. Participants self-identified their ethnic group identity, their child's age and ethnicity, gender, and reported their previous use of child mental health services.

Attitudes toward child mental health services. The *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) (Turner, 2006) was used to measure participants' help-seeking attitudes, mental health stigma and help-seeking intentions. The measure consists of 26 Likert-type items, assessing psychological openness, help-seeking intentions, and mental health stigma, and is scored on a Likert-type scale from 0

(strongly disagree) to 5 (strongly agree). Preliminary data using a sample of college students suggested the PATPSI has three subscales: Help-Seeking Attitudes (i.e., recognizing that a psychological problems exists and being open to seeking professional help), Help-Seeking Intentions (i.e., being willing and/or able to seek professional help), and Mental Health Stigma (i.e., being concerned about how others might think if they find out the individual were seeking professional help). Pilot testing in a sample of college students found alpha coefficients for these scales ranging from .72 to .86 and 1-week test-retest ranging from .66 to .84 (Turner, 2006). The PATPSI is provided in Appendix A.

Procedure

Parents and/or guardians were recruited from communities in Texas, Louisiana, and Mississippi. For the Study 1, the data were combined from different samples and data collection varied slightly (as described below). Undergraduate research assistants were recruited through the TAMU Psychology Department Undergraduate Research Practicum and received course credit for their time commitment to assisting with the project. The first sample (n = 101) was collected as part of Project RAISE, a larger study which examined parenting techniques and child behavior outcomes. Parents who chose to participate returned the consent form to their child's teacher and were then sent a packet of questionnaires. Families were only allowed to participate one time and report on one child, even if more than one child was enrolled in the recruitment sample. Parents who returned the questionnaire packet were compensated $10. The second sample

(n = 41) was collected as part of Project ABC, a laboratory observational study on parent-child interactions. Parents completed a questionnaire packet while waiting for their child to complete a series of tasks. At the end of the sessions, parents and their child received complementary t-shirts for their participation and no other compensation was received. The third sample (n = 118) was collected as part of the Children's Mental Health (CMH) project, a study on how parents' make decisions to seek help for children with emotional or behavior problems. Participants were recruited through flyers displayed at sites and sent home to parents. Participants who expressed interest were then contacted by the researcher or research assistants, and then questionnaires were distributed to participants to be completed. Participants were asked to complete the measures and return the packets within a week. Participants were allowed several methods to return the measure which included: completing in person at sites, returning in self-addressed envelope, or returning to the distribution site to be collected by research assistants. Following informed consent, all participants completed the study measures. Participants' names were entered into a drawing for a $25 Walmart gift card for completing the study measures. No other incentives were associated with this study.

STUDY 1 RESULTS

Preliminary data analyses

Data analyses for Study 1 were conducted in several steps. First, item–total correlations for each item of the PATPSI were calculated. Items that did not correlated at .30 or greater were eliminated from consideration (Clark & Watson, 1995). Of the 26 original items, 21 items remained based on that criterion (see Appendix A). Next, the factorability of the data was assessed using Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (Kaiser, 1974; Bartlett, 1954). The KMO values over .80 and significant results ($p < .05$) on Bartlett's test of sphericity suggest that the data is adequate for factor analysis (Kaiser, 1974; Bartlett, 1954). Since these requirements were met, confirmatory factor analysis (CFA) was conducted to assess the goodness of fit of the hypothesized 3-factor structure. The data was analyzed using the Maximum Likelihood (ML) method (Jöreskog & Sörbom, 2005) and model fit was evaluated using the Tucker-Lewis index or non-normed fit index (NNFI) (Bentler, 1990), the root mean squared error of approximation (RMSEA) (Hu & Bentler, 1999), and the comparative fit index (CFI) (Bentler, 1990). Following recommendations by Hu and Bentler (1999) a 2-index combination strategy was used. Finally, to examine the internal consistency of the PATPSI, reliability analyses were conducted by examining Cronbach alpha coefficients. George and Mallery (2003) suggest that Cronbach alphas coefficients ranging from .70-.80 are considered "good".

Hypothesis 1a: The PATPSI will demonstrate psychometrically sound factor structure

To examine the factor structure of the PATPSI, first the factorability of the data was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (Kaiser, 1974; Bartlett, 1954). The KMO values range from 0 to 1, with values over .80 suggesting that the data is adequate for factor analysis (Kaiser, 1974). The Bartlett's test of sphericity should be significant ($p < .05$). For Study 1, the KMO measure of sampling adequacy and Bartlett's test of sphericity suggested that the data were adequate for factor analysis [KMO = .802; χ^2 (210, N=260) = 936.185, $p < .0001$].

The 21 items of the PATPSI were submitted to a confirmatory factor analysis (CFA) to assess the goodness of fit of the hypothesized 3-factor structure using LISREL 8.71 statistical software. The data were analyzed using the Maximum Likelihood (ML) method. Model fit was evaluated using the Tucker-Lewis index or non-normed fit index (NNFI) (Bentler, 1990), the root mean squared error of approximation (RMSEA) (Hu & Bentler, 1999), and the comparative fit index (CFI) (Bentler, 1990). Hu and Bentler (1999) suggested that a 2-index combination strategy is the best way to access model fit and conclude that models with a NNFI, and CFI close to .10, and a RMSEA close to .06, suggests a good fit between the hypothesized model and the observed data. The NNFI and CFI have been found to be unaffected by sample size (Bentler, 1990). Results of the CFA using the ML method suggested replication of the hypothesized 3-factor model. Specifically, the chi-square statistic was significant [χ^2 (186, N=260) = 539.34,

$p < .0001$], the NNFI = .94, RMSEA = .08, and the CFI = .95, suggesting a good model fit for the 3-factor model. Following recommendations to use a 2-index combination (Hu & Bentler, 1999), the 3-factor model should not be rejected. See Table B3 for factor loadings.

Hypothesis 1b: The PATPSI will demonstrate adequate internal consistency

To examine the internal consistency of the PATPSI, analyses were conducted by examining alpha coefficients. Results indicated that internal consistency for the PATPSI total scale and subscales (Help-Seeking Intentions, Help-Seeking Attitudes, and Stigmatization) were .90, .70, .88, and .89, respectively. Overall, internal consistency was moderate to high given the sample size (Murphy & Davidshofer, 2001). Internal consistency for the PATPSI is presented in Table B3. Given the range of ethnicities represented in the sample, internal consistency was also examined for each ethnic group based on parents' ethnicity. For the PATPSI total, internal consistency was as follows: European American = .90, African American = .90, Hispanic American = .91, and Asian American = .92. See Table B4 for internal consistency for the PATPSI subscales across each group.

Study 1 discussion

In Study 1, the factor structure of the PATPSI was examined using confirmatory factor analysis. Using a sample of caregivers, results from the study supported the hypothesized 3-factor structure, although the present analyses suggested that 5 of the items used in the original study of the PATPSI (Turner, 2006) did not correlate well with the other items and were omitted from the measure before factor analysis. Based on

suggested cut-offs by Hu and Bentler (1999), the 3-factor model appeared to be a "good" fit for the data with fit indices close to the suggested cut-off. Additionally, when examining the standardized item loading for the sub-scales of the PATPSI, loadings indicated a "good" fit ranging from .37 to .93. Overall, the fit indices, as well as the individual item loadings suggest adequate fit for the data.

In addition to examining the factor structure of the PATPSI, the instrument's internal reliability was examined. First, internal consistency for the subscales and total scale ranged from .70 to .90, which were moderate to high. In general, Cronbach alpha coefficients of .80 are considered desirable (Clark & Watson, 1995). Based on those findings, internal consistency for the PATPSI in the current study is considered "good". Additionally, internal consistency was examined across ethnic groups and results were similar. This suggests that the PATPSI is reliable for use across different ethnic groups. Taken together, the analyses conducted in Study 1 suggest that PATPSI is a reliable measure to use as a research instrument.

STUDY 2 METHOD

Participants

Participants in the Study 2 consisted of the same 260 caregivers who participated in Study 1. Table B2 displays sample characteristics.

Measures

Demographic questionnaire. Demographic information was collected from each participant. Participants self-identified their ethnic group identity, their child's age and ethnicity, gender, and past use of child mental health services.

Attitudes toward child mental health services. The *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) (Turner, 2006) was used to measure participants' help-seeking attitudes, mental health stigma and help-seeking intentions. The final measure after completing the CFA analyses consists of 21 Likert-type items, and is scored on a Likert-type scale from 0 (strongly disagree) to 5 (strongly agree). The measure was previously described in Study 1. Reliability coefficients ranged from .70 to .90 for the subscales and total scale.

Procedure

Parents and/or guardians were recruited from communities in Louisiana, Texas, and Mississippi. For Study 2, the data was collected as described in the previous study. Subsequent analyses were conducted to examine specific hypotheses given the PATPSI was demonstrated to be a psychometrically sound measure.

STUDY 2 RESULTS

Preliminary data analyses

First, descriptive statistics generated, including the means and standard deviations for the major variables and the frequencies of previous experiences with mental health services, caregiver's education level, and types of previous service use. Study variables were screened for normality and outliers. None of the variables were skewed according to the cutoff values of 2 for skewness and 7 for kurtosis (West, Finch, & Curran, 1995). Furthermore, no outliers were detected based on the frequencies and distribution of the major continuous variables (Barnett & Lewis, 1994). Given that the assumptions of normality were met for the data, between subjects ANOVAs were used to test the study hypotheses. Post-hoc comparisons were conducted as appropriate. In analyses comparing ethnicity, individuals who did not identify their ethnicity were excluded. No other missing data related to the study hypotheses existed.

To test moderation, hierarchical linear regression analyses were conducted following procedures by Baron and Kenny (1986). In the first step, the categorical moderator variables were dummy coded with European American coded zero as the comparison group. The second step typically involves centering predictor and moderator variables that are measured on a continuous scale to prevent the impact of multicollinearity (Aiken & West, 1991; Frazier, Tix & Barron, 2004). Based on that procedure, only the continuous predictor variable was centered before analyses. Whereas there is a benefit to centering continuous predictor and moderator variable, there is no reason to center categorical variable or continuous outcome variable (Frazier et al, 2004). Therefore, in

moderation analyses the categorical variables were not centered. Finally, the product term was created by using the centered predictor and dummy coded variables. To examine hypothesis 2e-f, hierarchical regression analyses was conducted to predict help-seeking intentions. In the first step, the independent variables *(PATPSI Help-Seeking Attitude Scale, Mental Health Stigma)* and the moderator (ethnicity) were entered. Then, the interaction between ethnicity and the independent variables were added in the second step. If the interaction term was significant, further analyses were conducted to interpret the interaction effect (Aguinis, 2004; Aiken & West, 1991). Similar steps were taken to examine exploratory question 2g using child gender as the moderator. To examine exploratory question 2h, regression analyses were conducted to explore the relative individual contributions of previous service use, ethnicity, child gender, attitudes, and stigma on parental help-seeking.

Hypothesis 2a: Parental attitudes toward mental health services will be positively associated with help-seeking and parental ratings of mental health stigma will be negatively associated with help-seeking

To examine the associations among parental attitudes, mental health stigma, and intentions to seek mental health services, bivariate correlation analyses were conducted using the PATPSI Help-Seeking Intentions, Help-Seeking Attitudes, and Stigmatization subscales. Results indicated that parental help-seeking was significantly correlated with attitudes (r = .30, p =.01). No significant correlation was found between mental health stigma and help-seeking. Although not hypothesized, mental health stigma tolerance was significantly correlated with attitudes (r = .69, p =.01).

Hypothesis 2b: Parents with previous experience utilizing mental health services will report differences in attitudes, stigma, and intentions than parents with no previous use

To examine whether difference in attitudes, stigma, and help-seeking differed given previous child mental health services use, between-subjects ANOVAs were conducted with the PATPSI subscale scores (Help-Seeking Attitudes, Help-Seeking Intentions, and Stigmatization) as the dependant variables and parental report of previous service use as the independent variable. When examining parents' previous use of child mental health services, results indicated a significant difference for stigma [$F(1,258) = 15.69$, $p < .05$, $\eta_p^2 = .057$], and attitudes [$F(1,258) = 10.66$, $p < .05$, $\eta_p^2 = .040$]. Participants with previous use of child services reported higher mean Stigmatization scores ($M = 25.91$, $SD = 10.33$), which correspond to more stigma tolerance toward mental health services for children (i.e., less stigma), than participants with no previous use ($M = 18.63$, $SD = 11.14$). Additionally, participants with previous use of child services reported higher mean Help-Seeking Attitudes scores ($M = 24.84$, $SD = 11.36$), which correspond to more positive attitudes toward mental health services for children, than participants with no previous use ($M = 19.04$, $SD = 10.50$). No significant differences were found for the Help-Seeking Intentions subscale. Effect sizes ranged from small to medium based on Cohen (1988), which characterized .01 as a small effect size, and .06 as a medium effect size. See Table B5 for means and standard deviations.

Hypothesis 2c: Parents of boys will report higher intentions to seek child mental health services than parents of girls

To examine whether parents of boys reported higher intentions to seek child mental health services than parents of girls, a between-subjects ANOVA was conducted with child gender as the independent variable and the PATPSI Help-Seeking Intentions subscale as the dependent variables. Contrary to the study's hypothesis, results indicated that parents of boys did not significantly endorse higher intentions to seek services than parents of girls [$F(1,258) = 3.35$, $p = .068$]. However, there was a general trend towards parents endorsing higher intentions to seek services for boys ($M = 19.25$, $SD = 4.50$), than for girls ($M = 18.18$, $SD = 4.96$).

Hypothesis 2d: European American parents will report more favorable attitudes, lower mental health stigma, and higher intentions to seek services than African American, Asian American, and Hispanic American parents

To examine the hypothesis that European American parents will report more favorable attitudes, lower mental health stigma and higher intentions to seek services than African American, Asian American, or Hispanic American parents, between-subjects ANOVA's were conducted with PATPSI subscale scores (Help-Seeking Attitudes, Help-Seeking Intentions, and Stigmatization) as the dependent variables and ethnicity as the independent variable. When examining in the relation between parents' ethnicity and rating on the Help-Seeking Attitudes subscale, results indicated a significant effect [$F(3,249) = 5.55$, $p < .05$, $\eta_p^2 = .06$]. Post-hoc analyses indicated that

African Americans reported significantly less positive attitudes (M = 16.62, SD = 10.12) than European Americans (M = 20.90, SD = 11.44, p = .005), Hispanic Americans (M = 23.43, SD = 10.28, p = .001), and Asian American (M = 24.93, SD = 7.38, p = .006). No other group differences were statistically significant.

Secondly, when examining the relation between parents' ethnicity and their rating on the Stigmatization subscale, results indicated a significant effect [$F(3,249)$ = 14.52, p <.05, η_p^2 = .15]. Post-hoc analyses indicated that African Americans significantly reported less stigma tolerance (M = 13.64, SD = 11.88) than European Americans (M = 22.39, SD = 9.65, p < .001), Hispanic Americans (M = 24.18, SD = 10.99, p < .001), and Asian American (M = 23.20, SD = 8.50, p = .001). No other group differences were statistically significant. Effect sizes ranged from medium to large based on Cohen (1988), who characterized .01 as a small effect size, .06 as a medium effect size, and .14 as a large effect size.

Finally, when examining differences in parents' ethnicity and rating on the Help-Seeking Intention subscale, no significant results were found [$F(3,249)$ = 1.66, p = .19]. See Table B6 for means and standard deviations.

Hypothesis 2e: Ethnicity will moderate the relation between parents' attitudes and intentions to seek mental health service

To examine the moderation effects of ethnicity on the relation between attitudes and help-seeking intentions, hierarchical linear regression was used. Regression analyses indicated that Model 1, which included attitudes and ethnicity as predictors, was a significant predictor of help-seeking [F (3, 232) = 10.70, p < .0001, R^2 = .12]. With the

addition of the product terms (attitudes X African American; attitudes X Hispanic America) Model 2 was a significant predictor of parental help-seeking [F (5, 230) = 10.60, $p < .0001$, $R^2 = .19$]. The R^2 change associated with the product term was .07 ($p < .0001$), supporting the hypothesis that ethnicity acted as a moderator on the relation between attitudes and help-seeking. Follow-up simple slope analyses were conducted to further investigate the moderation model. Post hoc probing with t test of the significant slope were examined to determine whether it significantly different from zero, thereby determining which condition of the moderator was significant. Post hoc analyses revealed a significant relation between attitudes and help-seeking for European American parents [$\beta = .20$; t (232) = 5.72, $p < .0001$], but not for African American parents [$\beta = -.03$; t (232) = -0.63, $p = .530$]. See Table B7 for regression summary.

Hypothesis 2f: Ethnicity will moderate the relation between mental health stigma and intentions to seek mental health services

To examine whether ethnicity moderates the relation between mental health stigma and help-seeking intentions, hierarchical linear regression analyses were conducted. Results indicated that Model 1, which included stigma and ethnicity as predictors, were not significant predictors of parental help-seeking intentions [F (3, 232) = 2.05, $p = .11$, $R^2 = .03$]. With the addition of the product terms (stigma X African American; stigma X Hispanic America), Model 2 was a significant predictor of parental help-seeking [F (5, 230) = 2.80, $p = .02$, $R^2 = .06$]. The R^2 change associated with the product term was .03 ($p < .05$). These findings support the hypothesis that ethnicity acts as a moderator on the relation between stigma and help-seeking. Follow-up simple slope

analyses were conducted to further investigate the moderation model. Post hoc analyses revealed a significant relation between stigma and help-seeking for Hispanic American parents [$\beta = .19$; $t\ (232) = 2.82$, $p < .05$], but not for European American parents [$\beta = .02$; $t\ (232) = 0.46$, $p = .65$]. See Table B8 for regression summary.

Exploratory analysis 2g: This study also explored whether child gender will moderate the relation between attitudes and intentions to seek mental health service

Exploratory analyses were conducted to examine whether child gender moderates the relation between parents' attitudes and help-seeking intentions. Hierarchical linear regression analyses indicated that Model 1, which included attitudes and gender as predictors, was a significant predictor of parental help-seeking [$F\ (2, 235) = 11.32$, $p < .0001$, $R^2 = .09$]. With the addition of the product term (attitude X gender), Model 2 was a significant predictor of parental help-seeking [$F\ (3, 234) = 7.93$, $p < .0001$, $R^2 = .09$]. However, attitudes was the only variable that remained a significant predictor in this model, $t_{(3)} = 3.82$, $p = .001$, $\beta = .16$, $SE\ \beta = .04$. These findings do not support the hypothesis that child gender acts as a moderator. See Table B9 for regression summary.

Exploratory analysis 2h: This study also explored the relative contributions of previous service use, ethnicity, child gender, attitudes, and stigma on parental help-seeking intentions

Finally, regression analyses were conducted to examine the independent contributions of the study variables (i.e., previous service use, ethnicity, child gender, attitudes, and stigma) on help-seeking. Although there were no specific hypotheses, these follow-up analyses were examined to explore the relative contributions of

predictors of help-seeking. To examine which study variables predicted help-seeking, regression analyses were conducted entering the variables above. Regression analyses indicated significant findings [$F(5,247) = 8.43$, $p < .001$, $R^2 = .15$]. However, the only significant, independent predictors of help-seeking were mental health stigma [$t(247) = -3.29$, p = .001, $\beta = -.12$, $SE = .035$], and attitudes [$t(247) = 6.00$, p <.001, $\beta = .21$, $SE = .035$]. See Table B10 for regression analyses.

Study 2 discussion

In the current study, several hypotheses supported the findings in the literature. First, attitudes and intentions, and attitudes and stigma tolerance were highly correlated. This supported the notion that as parents' have a more positive view of mental health services they have less stigma and are more likely to utilize services. Secondly, parents who reported previously using child mental health services reported more positive attitudes and less mental health stigma. Parents with previous child mental health service use also reported higher mean help-seeking intentions scores in this sample, but these were not significantly different between groups. It is possible that other additive variables contribute to help-seeking such as parents' personal mental health service use, cultural expectations, or satisfaction with past service use. Pescosolido and colleagues (2008), found that parent' recognition of and response to childhood mental disorders is complicated by social and cultural norms that shape expectations of what is acceptable childhood behavior. Therefore, it is possible that those variables could influence parental help-seeking.

One unique contribution of the current study was examining the influence of parental stigma on the use of child mental health services which has received less attention in the child literature. This study supported the importance of stigma on mental health service use. One study in the adult literature has found that stigmatizing views and treatment adherences are directly related (Corrigan & Klein, 2005). It is possible that this same link exists in the child literature, but this has not been studied. Future studies should explore more directly the causal relationship between mental health stigma and parental help-seeking.

When examining gender differences in help-seeking for children, research findings generally indicate that boys are referred for treatment more than girls, however studies have reported inconsistent findings. The current study aimed to examine whether parents of boys would report higher intentions to seek child mental health services than parents of girls. Results in the study did not support this hypothesis. Parents of boys did not significantly endorse higher intentions to seek services than parents of girls. However, results indicated a trend toward parents reporting higher intentions to seek services for boys given their previous service use. One possible explanation for this finding is that no gender differences in parents' views toward help-seeking for children exist. It is possible that parents may refer boys more often than girls for services due to their perceptions that boys exhibit more emotional or behavioral difficulties.

The current study also examined ethnic difference in attitudes, mental health stigma, and intentions to seek services between European American, African American, Asian American, and Hispanic American parents. Specifically, it was hypothesized that

European American parents would report more favorable attitudes, lower mental health stigma and higher intentions to seek services than African American, Asian American, and Hispanic American parents. Some significant results were found, but the findings were not in the hypothesized direction. Findings in the current study indicated that African Americans parents reported less positive attitudes and more stigma than the other ethnic groups. No other significant differences were found. Interestingly, African Americans reported more stigma and negative attitudes than Asian Americans which typically have not been found in the literature. Studies typically show that Asian Americans exhibit the most negative attitudes and stigmatizing views towards mental health services. Additionally, the moderation effects of ethnicity on the relation between attitudes and help-seeking, and stigma and help-seeking were examined and some hypotheses were supported. Specifically, the results suggested that for European Americans attitudes are more likely to influence there service use compared to African Americans. Mental health stigma also appeared to have a significant influence on service use for Hispanic Americans. Some research suggest that (a) sociocultural experiences, such as discrimination and group identity, are more robust in explaining the variance in mental health service utilization among ethnic minority populations in comparison to European Americans, and (b) a different set variables help explain the variance in utilization among European American respondents (Richmond et al., 2007). Given these findings, it appears that attitudes are more likely to relate to service use for European Americans, whereas attitudes are less likely to relate to service use for ethnic minority populations. A more thorough discussion will be provided below in the integrated

discussion section. To improve treatment seeking, particularly for underserved populations, future research should explore a more thorough understanding of parents' perceptions and experiences.

Finally, analyses were conducted to examine the contributions of the study variables (i.e., previous service use, ethnicity, child gender, attitudes, and stigma) on help-seeking. Regression analyses indicated that both mental health stigma and attitudes were significant predictors of help-seeking. These findings suggest that differences in ethnicity and services use may be due to parental differences in their attitudes and levels of stigma tolerance. Overall, these findings corroborate results in the literature regarding the influence of attitudes and stigma on help-seeking (e.g., Ajzen & Fishbein, 2005, Mackenzie et al., 2006). However, one methodological limitation may have produced variance inflation given that the measure of help-seeking is highly related to the measure of stigma and attitudes because they were subscales of the PATPSI. The subsequent study will examine the influence of child characteristics on help-seeking and the potential moderation effects of attitudes and mental health stigma.

STUDY 3 METHOD

Participants

Participants in the Study 3 consisted of caregivers who participated in the CMH project. Study 3 consisted of 118 caregivers (90% female; n = 106) recruited from the College Station Independent School District (n = 109; 92%), and a local church in Louisiana (n = 9; 8%). The ethnic distribution of caregivers for Study 3 was 51% European American, 15% African American, 21% Hispanic American, and 13% Asian American. Participants ranged in age from 21 to 50 years old (M = 34.41 SD = 6.06). The ethnic distribution of the children (59% male; n = 70) was 48% European American, 18% African American, 20% Hispanic America, 12% Asian American and 2% were self identified as Bi-racial; ages ranged from 2 to 16 years old (M = 6.61 SD = 2.43). Forty-two percent of caregivers reported previous mental health service use for themselves and 25% reported previous child mental health service use. In addition, participants reported their education level, the total number of children in the household, and rated the likelihood they would seek services in the future for any mental health concern both for their child. See Table B2 for sample characteristics.

A sub-sample of 29 participants from Study 3 (25% of the sample) completed the PATPSI at least 2-weeks after the initial administration to assess test-retest reliability. The mean completion time between administrations was 3-weeks (SD = 2.43). The ethnic distribution of this sample was 83% European American, 4% African American, 10% Hispanic American, and 3% unknown.

Measures

Demographic questionnaire. Demographic information was collected from each participant (e.g., education level, ethnicity). Questions also asked participants about their previous contact with mental health professionals (e.g., social worker, psychologist) and how much their ethnicity or religious affiliation influence their decisions to use mental health services. Additionally, caregiver's likelihood of seeking mental health services were measured using a Likert-type question.

Child problem type. The *Strengths and Difficulties Questionnaire* (SDQ) was used to assess children's behavioral symptomatology (Goodman, 1997). The SDQ consists of 25 positive and negative attributes and produces a total difficulties score and five subscale scores (emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behavior). The SDQ is scored using a 3-point Likert scale from 0 (not true) to 2 (certainly true). The SDQ scores for internalizing (i.e., emotional symptoms) and externalizing subscales (i.e., conduct problems, hyperactivity) were used in this study. The SDQ has established reliability and validity. Mean alpha coefficients range from .63 to .88 for the internalizing and externalizing scales (Goodman, 2001). For the current study, alpha coefficients for the internalizing and externalizing scales were .78, and .86, respectively.

Attitudes toward child mental health services. The *Parental Attitudes Toward Psychological Services Inventory* (PATPSI) (Turner, 2006) was used to measure participants' help-seeking attitudes, mental health stigma and help-seeking intentions.

The measure was previously described in Study 1 and 2. For the current study, alpha coefficients ranged from .61 to .83.

Procedure

Parents and/or guardians were recruited from communities in Louisiana and Texas. For Study 3, the data was collected as previously described in Study 1. However, additional measures (i.e., likelihood of future service use, SDQ, and previous service provider) were included in the current study as part of the CMH project to examine subsequent analyses on the reliability of the PATPSI and moderation effects of ethnicity on likelihood of child mental health service use.

STUDY 3 RESULTS

Preliminary data analyses

First, descriptive statistics generated, including the means and standard deviations for the study variables and the frequencies of previous experiences with mental health services, caregiver's education level, and types of previous service use. Study variables were screened for normality and outliers. None of the variables were skewed according to the cutoff values of 2 for skewness and 7 for kurtosis (West, Finch, & Curran, 1995). Furthermore, no outliers were detected based on the frequencies and distribution of the major continuous variables (Barnett & Lewis, 1994). Similar to Study 2, in analyses comparing ethnicity, individuals who did not identify their ethnicity were excluded. No other missing data related to the study hypotheses existed. To test moderation, hierarchical linear regression analyses were conducted following procedures by Baron and Kenny (1986) as previously described. However, the dependant variable in this study was likelihood of future service use as opposed to the PATPSI Help-Seeking scale. This was done to examine whether findings in study 2 resulted from methodological limitations given that the measure of help-seeking was significantly related to the measure of stigma and attitudes because they were subscales of the PATPSI and may have produced variance inflation. To examine exploratory question 3i, regression analyses were conducted to explore the relative individual contributions of previous service use, ethnicity, child symptoms and gender, attitudes, and stigma on the likelihood of future service use.

Hypothesis 3a: Examined whether the PATPSI demonstrated adequate test-retest reliability

To examine test-retest reliability, Pearson correlation coefficients were calculated between test and retest score for the PATPSI total scale and subscales. Test-retest reliability was examined. However, only 25% of participants who received the PATPSI for a second administration completed the measure, which resulted in a sample size of 29. Additionally, participants were primarily European American (83%). Results indicated that test-retest reliabilities were as follows: Help-Seeking Attitudes, $r = .56$; Help-Seeking Intentions, $r = .33$; Stigmatization, $r = .76$; and PATPSI total score, $r = .67$. The suggested cut-off for good reliability is close to .80 or higher (Aiken, 1994). Based on this criterion, test-retest reliability is considered low.

Hypothesis 3b: Parental attitudes toward mental health services will be positively associated with likelihood of child mental health service use, parental ratings of mental health stigma tolerance will be positively associated with likelihood of child mental health service use, and past service use will be positively associated with likelihood of service use

To examine the associations among parental attitudes, mental health stigma, past service use, and future mental health services, bivariate correlation analyses were conducted using the PATPSI Help-Seeking Attitudes and Stigmatization subscales, parents report of past service use, and ratings of likelihood of future service use (as measured using a Likert question). Results indicated that parental likelihood of future service use was significantly correlated with attitudes ($r = .36$, $p = .01$) and with past

service use (r = .34, p =.01). Additionally, stigma tolerance was correlated with attitudes (r = .42, p =.01). Although not hypothesized, correlation analyses were conducted using the SDQ externalizing and internalizing scales, parents report of past service use, and parents report of future service use. Results indicated that parental past use was significantly correlated with report of externalizing symptoms (r = .42, p =.01). No other variables were correlated.

Hypothesis 3c: Parents' with previous use of child mental health services will report higher externalizing and internalizing child symptoms than parents with no previous service use

To examine hypothesis 3c, between-subjects ANOVAs was conducted with parental report of service use as the independent variable and the SDQ externalizing and internalizing subscales as the dependent variables. When examining parents' previous use of child mental health services and differences in reported child externalizing symptoms, results indicated a significant effect [$F(1,116) = 24.59$, $p < .0001$, $\eta_p^2 = .18$]. Participants with previous use reported higher mean externalizing symptoms (M = 8.97, SD = 4.76), than participants with no previous use (M = 4.85, SD = 3.55). Effect size was large based on Cohen (1988), who characterized .14 as a large effect size. When examining parents' previous use of child mental health services and differences in reported child internalizing symptoms, no significant results were found.

Hypothesis 3d: Parents of boys will report higher likelihood of future service use than parents of girls

To examine hypothesis 3d, between-subjects ANOVA was conducted with child gender as the independent variable and parental rating of future service use as the dependent variables. Results indicated that parents of boys did not significantly endorse higher intentions to seek services in the future than parents of girls.

Hypothesis 3e: Type of child behavior problem will predict likelihood of future service; and child gender will interact with problem type to predict likelihood of future service use

To examine hypothesis 3e, hierarchical linear regression analyses were conducted to examine whether type of behavior problem (externalizing and internalizing), and the interaction between gender X externalizing and gender X internalizing predicted likelihood of future service use. In Model 1, which included externalizing and internalizing symptoms as predictors, no significant results were found [F (2, 97) = 1.60, p = .21]. In Model 2, which included the addition of interaction terms (i.e., gender X externalizing, and gender X internalizing) as predictors, no significant results were found [F (2, 95) = .88, p = .48]. See Table B11 for regression summary.

Hypothesis 3f: European American parents will report more favorable attitudes, lower mental health stigma, and higher likelihood of future service use than African American, Asian American, and Hispanic American parents

To examine the hypothesis that European American parents will report more favorable attitudes, lower mental health stigma and higher likelihood of future service

use than African American, Asian American, or Hispanic American parents, between-subjects ANOVAs were conducted with PATPSI subscale scores (Help-Seeking Attitude, and Stigmatization), and future service use ratings as the dependent variables and ethnicity as the independent variable. When examining in the relation between parents' ethnicity and rating on the Help-Seeking Attitudes subscale, results indicated a significant effect [$F(3,116) = 2.70$, $p < .05$, $\eta_p^2 = .07$]. Post-hoc analyses indicated that Asian Americans reported significantly less positive attitudes ($M = 24.93$, $SD = 7.38$) than European Americans ($M = 30.37$, $SD = 6.45$, $p = .006$), Hispanic Americans ($M = 29.71$, $SD = 6.72$, $p = .032$), and African American ($M = 29.83$, $SD = 6.77$, $p = .038$). No other group differences were statistically significant.

Secondly, when examining the relation between parents' ethnicity and their rating on the Stigmatization subscale, results indicated a significant effect [$F(3,116) = 5.97$, $p = .001$, $\eta_p^2 = .14$]. Post-hoc analyses indicated that African Americans significantly reported more stigma tolerance ($M = 33.00$, $SD = 4.55$) than European Americans ($M = 27.27$, $SD = 8.17$, $p = .005$), and Asian American ($M = 23.20$, $SD = 8.50$, $p < .001$). No other group differences were statistically significant.

Finally, when examining differences in parents' ethnicity and report of likelihood of future service use, results did not indicate a significant effect [$F(3,116) = 2.44$, $p = .068$, $\eta_p^2 = .06$]. However, there was a general trend towards European Americans reporting a higher likelihood of future service use. Post-hoc analyses indicated that European American significantly reported higher likelihood ($M = 4.35$, $SD = .88$) than African Americans ($M = 3.67$, $SD = 1.61$, $p < .05$), and Asian American ($M = 3.67$,

SD = 1.21, $p < .05$). Overall, effect sizes ranged from medium to large based on Cohen (1988), who characterized .01 as a small effect size, .06 as a medium effect size, and .14 as a large effect size. See Table B12 for means and standard deviations.

Hypothesis 3g: Ethnicity will moderate the relation between parents' attitudes and likelihood of future child mental health service use

To examine the moderation effects of ethnicity on the relation between likelihood of future service use and attitudes, hierarchical linear regression was used to examine the study hypotheses. First, analyses were conducted to examine whether ethnicity moderates the relation between parents' attitudes and likelihood of future mental health service use. Regression analyses indicated that Model 1, which included attitudes and ethnicity as predictors, was a significant predictor of parents' likelihood to seek child mental health services [F (3, 97) = 7.62, $p < .0001$, $R^2 = .19$]. With the addition of the product terms (attitudes X African American; attitudes X Hispanic American), Model 2 was a significant predictor of parental likelihood of future service use [F (5, 95) = 4.48, $p < .0001$, $R^2 = .19$]. However, attitudes was the only variable that remained a significant predictor in this model, $t_{(5)} = 3.01$, $p < .0001$, $\beta = .07$, $SE\ \beta = .02$. These findings do not support the hypothesis that ethnicity was a moderator on the relation between attitudes and likelihood of future service use. Given the contradictory findings in Study 2, analyses were repeated with the PATPSI Help-Seeking scale as the criterion and again moderation was not supported. Therefore, the PATPSI Help-Seeking scale will not be used in further analyses. See Table B13 for regression summary.

Hypothesis 3h: Ethnicity will moderate the relation between mental health stigma and likelihood of future child mental health service use

Finally, analyses were conducted to examine whether ethnicity moderates the relation between mental health stigma and likelihood of future mental health service use. Hierarchical linear regression analyses indicated that Model 1, which included stigma and ethnicity as predictors, were significant predictors of parents' likelihood to seek child mental health services [F (3, 97) = 2.64, p = .05, R^2 = .08]. With the addition of the product term (stigma X African American; stigma X Hispanic American), Model 2 was a significant predictor likelihood of future service use [F (5, 95) = 2.56, p = .03, R^2 = .12]. Because the equation with the addition of the product term was significant [$t_{(5)}$ = -2.15, p < .05], the data was further inspected based on recommendations by Aiken and West (1991). Results indicated that African Americans significantly differed from European Americans. Specifically, the slope was less steep for African Americans (β = -.10, $SE\ \beta$ = .06) than for European Americans (β = .04, $SE\ \beta$ = .02). The R^2 change associated with the product term was .04 (p =.10). Follow-up simple slope analyses were conducted to further investigate the moderation model. Post hoc probing with t test of the significant slope were examined to determine whether it significantly different from zero, thereby determining which condition of the moderator was significant. Post hoc analyses revealed a significant relation between stigma and likelihood of seeking services for European American parents [β = .04; t (95) = 2.06, p <.05], but not for African American parents [β = -.10; t (99) = -1.63, p =.11]; indicating as their stigma

tolerance increases they are more likely to seek services. See Table B14 for regression summary.

Exploratory analysis 3i: Explore whether child gender will moderate the relation between attitudes and likelihood of future child mental health service use

Exploratory analyses were conducted to examine whether child gender moderates the relation between parents' attitudes and intentions to seek mental health service. Hierarchical linear regression analyses indicated that Model 1, which included attitudes and gender as predictors, was a significant predictor of parents' likelihood to seek child mental health services [F (2, 99) = 7.97, p = .001, R^2 = .14]. With the addition of the product term (attitudes X gender), Model 2 was a significant predictor of parental help-seeking [F (3, 98) = 5.72, p = .001, R^2 = .15]. However, attitudes was the only variable that remained a significant predictor in this model, $t_{(3)}$ = 3.44, p =.001, β =.09, $SE\ \beta$ = .03. These findings do not support the hypothesis that child gender was a moderator. See Table B15 for regression summary.

Exploratory analysis 3j: Explore the relative contributions, in a comprehensive model, of parental attitudes, mental health stigma, ethnicity, child's gender and problem behavior type on future use of child mental health services

Regression analyses were conducted to examine the independent contributions of the study variables (i.e., previous service use, ethnicity, child gender, attitudes, stigma, externalizing, internalizing, gender X externalizing, and gender X internalizing) on likelihood of service use. These analyses were examined to explore the relative contributions of predictors of likelihood of future service use. To examine which study

variables predicted service use, regression analyses were conducted entering the variables above. Regression analyses indicated that the overall model predicted a significant amount of variability in likelihood of future serve use [$F(9,90) = 3.25$, $p = .002$, $R^2 = .25$]. However, the only significant individual predictors of service use were previous use [$t(90) = 2.92$, p = .005, $\beta = .84$, $SE\ \beta = .29$], and attitudes [$t(90) = 3.60$, p = .001, $\beta = .07$, $SE\ \beta = .02$]. See Table B16 for regression analyses.

Study 3 discussion

In the current study, the test-retest reliability of the PATPSI was examined in a small sub-sample of participants. There was variability in the reliability across subscales, with coefficients for the PATPSI ranging from .33 to .76. The PATPSI Stigmatization subscale appeared to be the most reliable over time. According to Aiken (1994), an acceptable range for test-retest reliability is approximately .80 or higher. In the current study, one potential problem with the test-retest reliability was the differences in the variability across retest administrations. On average, participants completed the measure over a 3-week period (administration ranged from 2- to 6-weeks). Given these findings, future studies should examine the psychometric properties of the PATPSI in another sample. Additionally, it would be advantageous to use a sample with one method of administration to examine the psychometric properties.

When examining correlation analyses, results suggested that attitudes were correlated with stigma tolerance and likelihood of future service use. Additionally, previous service use was correlated with parents' report of externalizing symptoms and likelihood of future service use. These findings are consistent with the literature and

results from Study 2. Findings from the current study also supported the literature regarding the correlation between externalizing symptoms and service use. Given these findings, it appears that parents are more likely to use services when they can easily recognize symptoms as problematic, have more positive attitudes, and have less stigmatizing views.

When examining ethnic difference in attitudes, mental health stigma, and likelihood of future services use between European Americans, African Americans, Asian Americans, and Hispanic American parents, some findings were consistent with the literature. In the current sample, Asian Americans reported less positive attitudes, and more mental health stigma than the other ethnic groups. Past studies have found that the cultural stigma and shame often associated with mental illness and the institutional barriers frequently common to traditional mental health services have made it difficult for Asian Americans to seek services (Akutsu & Chu, 2006). This was consistent with the finding in the current study. Contrary to the literature on ethnic differences between African Americans, Hispanic Americans, and European Americans few significant differences were found. Specifically, African Americans reported more positive attitudes than Asian Americans, and more stigma tolerance than European Americans and Asian Americans. Finally, there was a trend towards European Americans reported higher likelihood of future service use than African Americans and Asian Americans.

In addition to the previously discussed findings, Study 3 also examined the moderation effects of ethnicity and child gender on the relations between attitudes and future service use, and stigma and future service use. To date, no previous studies have

examined the potential moderation effects of ethnicity, but have mostly discussed group differences in attitudes and service use. The current study examined whether ethnicity and child gender acted as a moderator variable on likelihood of future service use. However, contrary to Study 2, no moderation effects were found except for the influence of ethnicity on the relation between mental health stigma and likelihood of service use. Specifically, resulted supported the hypothesis that for European Americans, they are more likely to seek services as their tolerance of stigma increases. Given the finding in Study 2, it is possible that methodological limitations such as measurement and small sample size decreased the ability to detect an effect it one was present. For example, Study 2 had a much larger sample and used a more comprehensive measure of service use (i.e., PATPSI Help-Seeking scale).

Finally, regression analyses were conducted to explore the relative contribution of the following variables on likelihood of future services use: previous service use, ethnicity, child gender, attitudes, stigma, externalizing, internalizing, gender X externalizing, and gender X internalizing. Regression analyses indicated that only previous service use and attitudes were significant predictors of likelihood of future service use. These findings are consistent with the literature and results from Study 2 suggesting the influence of attitudes on child mental health service use. Although these findings generally support the literature, they should be interpreted with caution given the small sample size.

GENERAL DISCUSSION AND CONCLUSIONS

The current study, composed of a series of three studies, examined the psychometric properties of the PATPSI and the relation among parental attitudes, mental health stigma, and mental health service use. Given the importance of studying parental attitudes and the lack of a standardized measure, one of the aims of these studies was to examine the factor structure and reliability of the PATPSI. According to the literature, instrument reliability and validity are essential to be examined when describing the psychometric properties of an established or a new measure (Cronbach & Meehl, 1955). In general, the PATPSI appears to be a useful measure as a research instrument. CFA fit indices, as well as, the individual item loadings suggested a "good" fit for the data. Additionally, the internal reliability and test-retest reliability of the PATPSI were examined. First, internal consistency for the subscales and total scale ranged from moderate to high. In general, Cronbach alpha coefficients of .80 are considered desirable (Clark & Watson, 1995), therefore, internal consistency for the PATPSI is considered "good". Internal reliability of the PATPSI was found to be similar to findings for the ATSPPHS, which studies have found to range from .83 to .90 (Cepeda-Benito & Short, 1998; Fischer & Turner, 1970; Vogel & Wester, 2003). Finally, test-retest reliability was examined in Study 3, with Pearson correlation coefficients for the PATPSI subscales ranging from .33 to .76. Although in the current sample test-retest reliability was low, variability existed in the reliability across subscales. For example, the Stigma subscale appeared to be the most stable over time. According to Aiken (1994), an acceptable range for test-retest reliability is approximately .80 or higher. In the present study, no

PATPSI subscale fell above the suggested cut-off. One potential problem with the test-retest reliability was the differences in the variability across retest administrations. On average, participants completed the measure over a 3-week period (administration ranged from 2 to 6-weeks). Given these findings, it is possible that several variables may have contributed to the low test-retest reliability. For example, it is possible that variables such as stigma and attitudes fluctuate over time. When examining the internal consistency of the PATPSI items, they appeared to be within a desirable range suggesting that the items appropriately measure their intended constructs. Additionally, the internal consistency was similar across ethnic groups. Finally, although the PATPSI appears to be useful as a research instrument, it may not be applicable for adequately measuring change over time. However, given the methodological weaknesses discussed below, temporal stability should be further explored. In the meantime, measuring change over time for research purposes should be done with caution. However, the PATPSI could potentially be used in a clinical setting to gather information during the intake process. Further implications are discussed below.

One of the aims of these studies was to examine components of the Theory of Planned Behavior (Ajzen, 1985; 1991). The TPB states that an individual's intention to perform a given behavior is a function of attitude toward the behavior (i.e., attitudes), subjective norm (i.e., mental health stigma), and perceived behavioral control. However, the TPB model has not been utilized in the child mental health literature. When comparing the main findings of this study to the TPB, results supported the relations among parental attitudes, mental health stigma, and service use. Specifically, parents

who reported previously using child mental health services reported more positive attitudes and less mental health stigma than parents with no previous service use. Additionally, regression analyses indicated that both mental health stigma and attitudes, in addition to previous service use, were significant independent predictors of service use. Findings suggest that the TPB is applicable for applying it to child mental health research.

Another aim of Studies 2 and 3 was to examine potential ethnic differences in attitudes, mental health stigma, and help-seeking. In general, findings were consistent with the literature supporting the complexity of mental health disparities. In the present studies, few significant ethnic differences were found. In Study 2, results from found that African Americans reported less positive attitudes and less stigma tolerance than the other ethnic groups. Whereas, Study 3 found that Asian Americans reported less positive attitudes and African Americans reported more stigma tolerance than European Americans and Asian Americans. An important variable that differed between Studies 2 and 3 was parents' past use of child mental health services, which may have influenced these results. In Study 2, approximately 17% of parents reported past use versus 25% of parents in Study 3. Additionally, 41% of parents in Study 3 reported previously using mental health for themselves, but this information was not measured in Study 2. As discussed earlier, parents past use of mental health services (e.g., for themselves and their children) have a significant impact on their perceptions towards child mental health services (e.g., Turner & Liew, in press).

Up to this point, when examining mental health disparities, the literature has primarily focused on ethnic or racial differences between clients seeking services for themselves. Overall, results suggest that African Americans and Asian Americans have attitudes and stigmatizing views that may differentially influence their use of child mental health services. Although ethnicity may provide some understanding of individual mental health service use, it may not explain the lack of child mental health service use initiated by parents. This is consistent with the inconsistencies reported in the literature regarding ethnic differences in mental health service use (e.g., Alvidrez, 1999; Broman, 1987; Gonzalez et al., 2005). Given African American's historical experiences within the field of psychology, one might expect that these individuals may have some negative views toward psychological services. Richman, Kohn-Wood, & Williams (2007) report that for African Americans, past discrimination and identity variables are more important than structural variables such as education or income in explaining mental health utilization. Additionally, studies have found that Asian Americans appear to exhibit cultural stigma and shame associated with mental illness that makes it difficult for them to seek services (e.g., Akutsu & Chu, 2006; Akutsu, Snowden, & Organista, 1996) and it is possible that this may also apply to African Americans. For example, some posit that seeking treatment for mental health problems are less culturally acceptable for African Americans who worry about appearing spiritually weak by family members or friends (Mishra et al., 2009). Therefore, cultural expectations and spirituality may have a stronger influence on help-seeking for African Americans. Another possible explanation for ethnic difference is that individuals differ in their

perceived perceptions of institutional and sociocultural barriers. Researchers have reported that those variables also influence service use (e.g., Cauce et al., 2002; Shea and Yeh, 2008); however, they were not measured in the current studies.

Additionally, moderation effects of ethnicity and child gender on the relation between attitudes and services use, and mental health stigma and service use were examined. Up to this point, no studies have explored the moderating effects of ethnicity on help-seeking. Whereas, Study 2 found that ethnicity moderated the relation between attitudes and help-seeking intention, these findings were only partially replicated in Study 3. Specifically, findings generally suggested that attitudes have a stronger impact on European American parents' decisions, while stigma has a stronger impact on Hispanic American parents' decisions to seek services. Findings from the current studies suggest that for different ethnic groups different variables have a stronger influence on their use of child mental health services. Given that the samples consisted of participants from different States, it is possible that the effects of ethnicity found may be more geographical (e.g., state or region) in nature versus racial. These moderation effects may explain some of the inconsistencies previously reported in the help-seeking literature. Additionally, when examining mental health disparities some third variable may predict service use for different ethnic groups. For example, Whaley (2001a; 2001b) reported that a strong positive association between cultural mistrust and dissatisfaction with services and unwillingness to seek mental health services was evident for African American parents, but not for their Hispanic and Asian American counterparts.

Finally, Studies 2 and 3 examined the impact of child characteristics such as gender and behavior problem type on the use of mental health services. When examining gender differences in help-seeking for children, prior research findings generally indicate that boys are referred for treatment more than girls (e.g., Cohen & Hasselbart, 1993; Zimmerman , 2005), other studies have not found gender differences (e.g., Weisz & Weiss, 1991). In this study, parents of boys did not significantly endorse higher intentions to seek services than parents of girls. However, Study 2 indicated a trend toward parents reporting higher intentions to seek services for boys than girls given their previous service use. Additionally, child gender was not found to moderate the relationship between attitudes and service use. One possible explanation for this finding is that no gender differences in parents' views toward help-seeking for children exist. Pescosolido and colleagues (2008) reported that parents' recognition of and response to childhood mental disorders is complicated by social and cultural norms that shape expectations of what is acceptable childhood behavior. It may be that the fact that parents refer boys more often than girls for services due to their perceptions that boys exhibit more behavioral difficulties, rather than having perceptions that treatment is more appropriate for boys than in girls.

In addition to gender characteristics, studies have also found that child externalizing problems are referred for services significantly more than internalizing problems (e.g., Weisz & Weiss, 1991). The current study examined parents' previous use of child mental health services and results indicated that parents who reported previous use of mental health services endorsed higher mean externalizing symptoms

than parents with no previous use (even though current symptoms levels remained in the non-clinical range). No differential effects of previous service use were found for parents ratings of internalizing symptoms. This provides supporting evidence that children with externalizing problems are more likely to receive treatment when exhibiting difficulties because they may be more recognizable by adults. Gustafson, McNamara, and Jensen (1994) reported that parents were more likely to seek mental health treatment for their children when their children's behavioral problem was severe and when the parents had positive attitudes toward seeking treatment. Although this sample was not clinic-referred, the findings support the hypothesis that some types of symptoms and behaviors lead to mental health care because they are more distressing to the parent, or seen as requiring treatment (e.g., Cuffel, 1997). Additionally, the interaction between gender and symptoms was explored and no significant results were found. One possible explanation for this finding is that because this was a non-clinical sample the interaction was not found. When examining sample characteristics, few children reached symptom levels in the clinical range (based on SDQ criteria). It is possible that if interaction effects were examined in a clinical sample, different results may have been found.

Strengths and limitations

The current studies have several strengths and limitations. Study 1 is one of the first known to develop a psychometrically sound measure of parental attitudes toward child mental health services. Whereas the reliability and validity of the PATPSI was generally acceptable, some limitations exist. First, the sample used to examine the factor structure of the PATPSI was composed of participants from three different research

projects (i.e., multiple sites), potentially adding unwanted variability into the data. This could potentially be seen as a limitation, because validity and reliability of an instrument are context dependent (e.g., population, administration format) and could potentially vary in another context (Switzer et al., 1999). Additionally, some participants completed the measures via the computer and others by paper and pencil (which varied even within sites). These differences in administration format may have influenced the reliability of the PATPSI or produced methodological issues that could have artificially impacted results. Although this could be seen as a limitation, it could also be seen as a potential strength. For example, although the CFA sample consisted of multiple sites, the fit indices were still in the adequate range. Given methodological differences across samples (and within sites), it was not feasible to test the impact of administration format on reliability and this should be explored in future studies. One specific limitation was not being able to examine these potential differences because there was no record of which format participants completed. According to Switzer and colleagues (1999), because validity and reliability are dependent upon contextual factors validating a measure should be viewed as a process of accumulating evidence over time.

Although the PATPSI appears to be an adequate measure, another limitation was the small sample size that was used to examine the test-retest reliability. Only 29 participants completed the second administration of the PATPSI. This small sample was also not representative of the total sample. It represented primarily European American caregivers. Additionally, there was variability in the time that elapsed between administrations and the method of which measures were administered (e.g., paper-pencil

or computer). In the Study 3, completion time for test-retest ranged from 2 to 6 weeks. Experts recommend that a time point within the interval of 2 to 4 weeks from initial administration as the most appropriate interval for examining consistency across multiple measurements (Nunnally & Bernstein, 1994). Future studies should examine the reliability across time with a larger sample and across different time intervals. For example, examine the reliability of the PATPSI at 1-week and 2-weeks. This would allow for examination of the limits for using the measure in research settings.

Finally, when exploring ethnic differences in service use and moderation effects, these studies were one of the first known to use of a psychometrically sound, comprehensive measure of parental attitudes to examine ethnic differences and moderation effects. Results supported the complexity of studying mental health disparities and provided some evidence regarding variables to consider when developing psychoeducation programs and engaging parents in treatment. However, some potential methodological limitations may have influenced the statistical power to detect an effect such as: (a) the small total sample size, (b) unequal sample size across groups, and (c) small sample size in each subgroup. According to Aguinis (2004), those issues affect the power of any moderated multiple regression analysis. When attempted to replicate findings from Study 2, the sample size decreased significantly, which may have influenced the results of Study 3.

Implications for future research and practice

Although these studies provide important information to clarify the role of parental attitudes, mental health stigma, and child characteristics on child mental health

service use, future studies should build upon these findings to clarify inconsistencies in the literature given some limitations due to sample characteristics and methodological issues. First, given the findings of the psychometric properties of the PATPSI, future studies should examine the psychometric properties of the PATPSI in another sample (i.e., clinical and community). For example, research could examine whether there are differences in the factor structure across sample demographics (e.g., regions, education level, and gender). Information gained from subsequent findings should be used to refine the measure as appropriate. Additionally, it would be advantageous to use a sample with one method of administration to examine the psychometric properties.

Secondly, given the sample was non-clinical in nature (most children did not have significantly elevated levels of symptoms) it's possible other differences in child gender or symptoms exists in relation to service use. For example, some have reported that parents from different cultures (i.e., ethnic groups) often have varying thresholds for differentiating normal from abnormal child behavior, and that parents are likely to seek help only after the behavior is perceived as being abnormal (Eiraldi et al., 2006). One question that was not explored in the current study is whether these individuals were currently in treatment. The questionnaire used in the study asked about child symptoms over the past 6-months, therefore it would be informative to know how recent parents had sought treatment.

Based on the information in the current study and potential future research, the knowledge gained has important practical implications. First, information could be used to provide beneficial information for developing effective strategies to increase the

number of children receiving treatment. For example, in adult populations a study was conducted to examine the effects of a brief 15-minute psychoeducational intervention on medical patients referred for psychotherapy (Alvidrez et al., 2005). Results were promising, indicating that a stigma psychoeducation intervention was effective in increasing attendance and entry to mental health providers for adults. Findings in the current study suggested that for some parents stigma played an important role, on the other hand, attitudes were more important for others in influencing their decisions to seek treatment. It is possible that similar interventions may be effective in changing attitudinal and stigmatizing beliefs, which may improve help-seeking and treatment compliance. For example, in clinical practice a parent who is referred to seek treatment may be reluctant to attend due to certain negative views they have about mental health services.

Although progress has been made in individual's perceptions about mental health services and a substantial proportion of the population recognizes children's mental health disorders, many still do not. Findings from the National Stigma Study-Children (NSS-C; Pescosolido, 2009) support the need for general public education about childhood mental disorders and about caregivers' perceptions of mental illness. Considering that children spend a substantial amount of time in the school system, potential education programs could be provided during school events where a large number of parents are present. If these programs are facilitated by qualified mental health professionals, it could be a source of referral for parents and provide opportunities for parents to have their questions answered free from pressure. If those avenues are

somewhat effective, they could at least increase parents' openness to seek services. Findings from the current studies suggest that the content of these programs may need to vary depending on which ethnic group is being focused on. Given these findings, it may be more appropriate to provide information that address stigmatizing views for ethnic minorities and attitudinal components for European Americans. Additionally, one study found that African Americans draw a distinction between a person having "emotional problems" or "mental illness", with the former being seen as less serious and less stigmatizing (Mishra et al., 2009). This may imply that when designing potential programs, even terminology will need to vary depending on racial/cultural groups. In a study examining the effects of a psychoeducation intervention in African American adults, researchers found that the type of information presented had a differential impact on treatment depending on the nature of the clients' concerns (Alvidrez, Snowden, Rao, & Boccellari, 2009). One might expect that European Americans and ethnic minorities have varied concerns and the type of information could differentially influence their attitudes or stigmatizing views.

When considering potential ethnic difference and how parents' racial background relates to services use, clinicians should be prepared to have open dialogue with their client to manage potential resistance and non-compliance. This could be explored during the intake session in an effort to improve the likelihood that they will continue treatment. The findings of these studies suggest that there is variability in how attitudes and stigma impacts parents' decisions. With that in mind, clinicians should be reluctant to generalize about how racial/cultural variables impact mental health service use. Parents

should be encouraged to explore their individual beliefs about mental health services and considerations should be given to be culturally sensitive. For example, clinicians should be cognizant of understanding how cultural experience hinder or encourage a parent to utilize and comply with treatment. Clinicians should also make a deliberate effort to inquire about barriers (e.g., treatment acceptability, time commitment) parents have that may influence an intervention being successful as they are important when considering compliance with any intervention. Findings from these studies suggest that racial/ethnic backgrounds are important to explore in regards to attitudes toward child mental health services. Particularly, some ethnic differences in attitudes and mental health stigma were found. However, these ethnic differences were not found for help-seeking intentions. Therefore, efforts need to heavily focus on understanding what variables influence help-seeking for individuals with no previous mental health treatment use. More recently, some have postulated that although attitudes and stigma are important, they may not always translate into corresponding behaviors (e.g., Alvidrez et al., 2009). Given the large number of children not receiving necessary mental health services, this work has the potential to have a significant public health impact. Particularly, if treatment seeking is improved it could help with preventing the developing of future psychopathology and adjustment difficulties for children.

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APPENDIX A

Directions: For each item, indicate whether you ***strongly disagree (0), disagree (1), somewhat disagree (2), somewhat agree (3), agree (4) or strongly agree (5).*** The term *"psychological problems"* refer to reasons one might visit a professional. Similar terms include: mental health concerns, emotional problems, mental troubles, and personal difficulties. The term *"professional"* refers to individuals who have been trained to deal with mental health problems (e.g., psychologist, psychiatrist, social workers, and physicians).

0	1	2	3	4	5
strongly disagree					strongly agree

		Strongly disagree					Strongly agree
1.	I would not want others (friends, family, teachers, etc.) to know if my child had a psychological or behavior problem.	0	1	2	3	4	5
2.	To avoid thinking about my child's problems, doing other activities is a good solution.	0	1	2	3	4	5
3.	Having been mentally ill carries with it feelings of shame.	0	1	2	3	4	5
4.	If my child were experiencing a serious psychological or behavior problem at this point in my life, I would be confident that I could find relief in professional help.	0	1	2	3	4	5
5.	If my child were to experience a psychological or behavior problem, I could get professional help if I wanted to.	0	1	2	3	4	5
6.	Important people in my life would think less of my child if they were to find out that he/she had a psychological or behavior problem.	0	1	2	3	4	5
7.	Psychological problems tend to work out by themselves.	0	1	2	3	4	5
8.	It would be relatively easy for me to find the time to take my child to see a professional for help.	0	1	2	3	4	5
9.	I would want to get professional help if my child were worried or upset for a long period of time.	0	1	2	3	4	5
10.	I would be uncomfortable seeking professional help for my child because people (friends, family, coworkers, etc.) might find out about it.	0	1	2	3	4	5

0 1 2 3 4 5											
strongly disagree											strongly agree
						Strongly disagree					Strongly agree
11. I would not want to take my child to a professional because what people might think.						0	1	2	3	4	5
12. There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without seeking professional help.						0	1	2	3	4	5
13. If I believed my child were having a mental breakdown, my first decision would be to get professional help.						0	1	2	3	4	5
14. I would feel uneasy going to a professional because of what some people would think.						0	1	2	3	4	5
15. Strong willed individuals can handle emotional or behavior problems without needing professional help.						0	1	2	3	4	5
16. Had my child received treatment for a psychological or behavior problem, I would feel that it should be “kept secret”.						0	1	2	3	4	5
17. I would be embarrassed if my neighbor saw me going into the office of a professional who deals with mental health concerns.						0	1	2	3	4	5
18. People should workout their own problems instead of getting professional help.						0	1	2	3	4	5
19. There are things that happen in my family I would not discuss with anyone.						0	1	2	3	4	5
20. Seeking professional help is a sign of weakness.						0	1	2	3	4	5
21. Strong willed parents can handle problems without professional help.						0	1	2	3	4	5

APPENDIX B

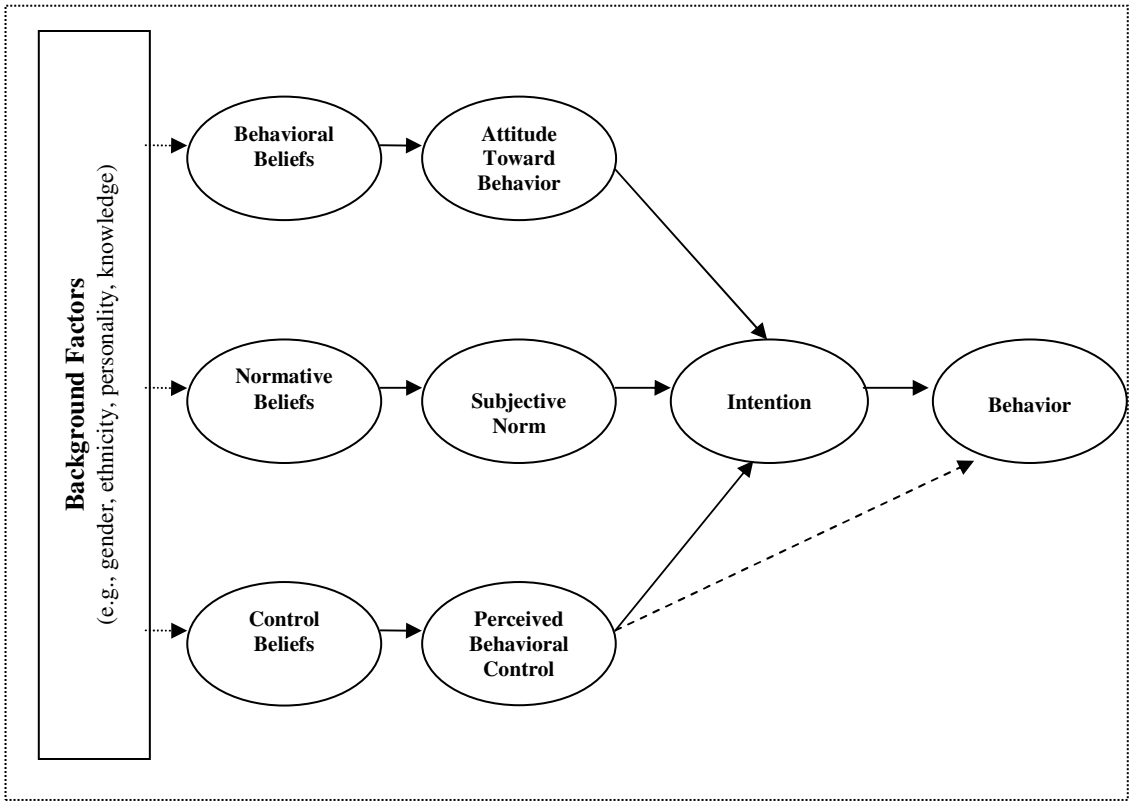

Figure B1 *Theories of Reasoned Action and Planned Behavior*

Table B1 *Studies on Help-Seeking Attitudes and Ethnic Differences*

Reference	Sample Type	Attitude Measure	Type of Attitude	Outcome(s) Measured	Results
Garland, Lau, Yeh, McCabe, Hough, & Landsverk (2005)	parents; community	-	-	Parent Service Use	NHW had the highest rates of outpatient mental health service use; followed by LA, AA, and A/P
Kataoka, Zhang, & Wells (2002)	parents; community	-	-	Parent Service Use	NHW had the lowest rates of unmet need; higher rates of unmet need by AA, and LA
Padgett, Patrick, Burns, & Schlesinger (1994)	community	-	-	General Service Use	NHW had the highest rates of outpatient mental health service use; followed by LA, and AA
Broman (1987)	adults; community	-	-	Adult Service Use	AA were more likely to seek help from mental health professionals than NHW
Alvidrez (1999)	adults; clinical	2 items (one from the ATSPPHS; Fisher & Turner, 1970)	mental health	Adult Women Service Use; Mental Health Attitudes	NHW reported higher rates of mental health service use; followed by AA, and LA. AA and LA reported higher views that problems should not be disussed outside the family than NHW
Yeh, McCabe, Hough, Dupuis, & Hazen (2003)	parents; community	-	-	Parent Service Use	A/P, AA, and LA reported higher unmet need than NHW. However, they reported fewer barrier than NHW

Note. EA= European American, AA= African American, LA= Latino/Hispanic American, A/P= Asian American/Pacific Islander

Table B1 *Continued*

Reference	Sample Type	Attitude Measure	Type of Attitude	Outcome(s) Measured	Results
McKay, Pennington, Lynn, & McCadam (2001)	parents; clinical	-	-	Parent Service Use; Mental Health Attitudes	No differences in race/ethnicity were found for service use; attitudes were significantly related to session attendence
Gonzalez, Alegria, & Prihoda (2005)	adults; clinical	3 items	mental health	Mental Health Attitudes	Older adults reported more positive attitudes than young adults; AA reported more positive attitudes than NHW, but no difference were found for NHW and LA
Mojtabi, Olfson, & Mechanic (2002)	adults; clinical	3 items	mental health	Mental Health Attitudes; Adult Service Use	32% perceived a need for professional help; of those 59% sought help; variables relating to help-seeking included older age, having a physical condition, and positive attitudes
Fischer & Turner (1970)	young adults; community	ATSPPHS; Fisher & Turner, 1970	mental health	Mental Health Attitudes	females reported more positive attitudes than males; individuals with previous service use reported higher attitudes than those with no previous use
Mackenzie, Gekoski, & Knox (2006)	older adults; community	IASMHS; Mackenzie et al., 2004	mental health	Mental Health Attitudes; Adult Service Use	older adults and women reported more positive attitudes than young adults and men; predictors of service use included gender, marital status, and past use
Cash, Kehr, & Salzbach (1978)	young adults; community	ATSPPHS; Fisher & Turner, 1970	mental health	Mental Health Attitudes	individuals with previous service use reported more positive attitudes

Note. EA= European American, AA= African American, LA= Latino/Hispanic American, A/P= Asian American/Pacific Islander

Table B1 *Continued*

Reference	Sample Type	Attitude Measure	Type of Attitude	Outcome(s) Measured	Results
Diala, Muntaner, Walrath, Nickerson, LaVeist, & Leaf	adults; community	2 items	mental health	Mental Health Attitudes; Service Use	AA reported more positive attitudes than NHW; However, among users AA reported more negative attitudes than NHW; AA were less likely to use services than NHW
Starr, Campbell, & Herrick	parents; community	EMHC; Richardson, 2001	mental health	Parental Attitudes; Mental Health Service Use	60% of parents reported concerns regarding mental health care; 67% perceived problems, but of those only 37% reported their child needed services
Zahner & Daskalakis	parents; community	1 item	mental health	Parent Service Use	AA and LA reported lower service use than NHW; parental attitudes marginally influence service use. Parents' perceived need was the strongest predictor of service use
McMIller & Weisz (1996)	parents; clinical	-	-	Parent Service Use	NHW were more likey than AA & LA to seek professional help; parents' perceived severity also influenced service use
Zimmerman (2005)	parents; community	-	-	Parent Service use	girls were more likely to get services than boys; AA & LA were less likely to seek services than NHW

Note. EA= European American, AA= African American, LA= Latino/Hispanic American, A/P= Asian American/Pacific Islander

Table B2 *Sample Characteristics*

	Study 1 and Study 2		Study 3	
Variable	*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Parent	Child	Parent	Child
Gender				
Male	17 (7)	136 (52)	12 (10)	70 (59)
Female	243 (93)	124 (48)	106 (90)	48 (41)
Age (in years)				
M (SD)	-	5.11 (1.45)	34.41 (6.06)	6.61 (2.43)
Ethnicity				
African American	83 (32)	89 (34)	18 (15)	21 (18)
European American	114 (44)	102 (39)	61 (51)	56 (48)
Hispanic American	40 (15)	39 (15)	24 (21)	24 (20)
Asian American	15 (6)	14 (5)	15 (13)	14 (12)
Biracial	-	-	-	2 (2)
Other	8 (3)	16 (6)	-	1 (.8)
Number of Children in household				
M (SD)	-		2.42 (1.02)	
Previous Mental Health Service Use				
Yes	-	43 (17)	49 (41)	29 (25)
No	-	217 (83)	69 (59)	89 (75)
Previous Mental Health Provider*				
Counselor	-	-	19 (23)	12 (16)
Psychologist	-	-	22 (27)	18 (24)
Minister	-	-	10 (12)	1 (1)
Psychiatrist	-	-	11 (13)	13 (17)
Social Worker	-	-	3 (4)	3 (4)
Physician	-	-	17 (21)	14 (19)
School	-	-	-	11 (15)
Other	-	-	-	3 (4)

Note. * some participants had experience with multiple providers

Table B2 *Continued*

Variable	Study 1 and Study 2 *n* (%)	Study 1 and Study 2 *n* (%)		Study 3 *n* (%)	Study 3 *n* (%)
	Parent	Child		Parent	Child
Parents' Education Level*					
High school or below	83 (32)	-	8th grade or below	4 (3)	-
			Some high school	5 (4)	-
College education	126 (48)	-			
			High school graduate	11 (9)	-
Graduate education	51 (20)	-			
			Some college/ technical school	23 (20)	-
			Graduated 2-year college/tech school	10 (9)	-
			Bachelors degree	36 (31)	-
			Masters degree	18 (15)	-
			Doctoral degree	10 (9)	-

Note. *For Study 1-2, parental education was reported different for Study 3; High school or below = those who earned a diploma and those who only completed some grade school education, College education = those with a Bachelors degree and those with only some college experience, Graduate education = those with either a Masters or Doctoral degree.

Table B3 *Standardized Factor Loadings and Internal Consistency for the PATPSI*

Scales (α)	Factor Loadings
Help-Seeking Intentions (.70)	
8. If my child were to experience a psychological or behavior problem, I could get professional help if I wanted to.	.81
13. I would want to get professional help if my child were worried or upset for a long period of time.	.65
17. If I believed my child were having a mental breakdown, my first decision would be to get professional help.	.51
7. If my child were experiencing a serious psychological or behavior problem at this point in my life, I would be confident that I could find relief in professional help.	.73
11. It would be relatively easy for me to find the time to take my child to see a professional for help.	.47
Stigmatization (.89)	
15. I would not want to take my child to a professional because what people might think.	.93
18. I would feel uneasy going to a professional because of what some people would think.	.82
14. I would be uncomfortable seeking professional help for my child because people (friends, family, coworkers, etc.) might find out about it.	.80
22. I would be embarrassed if my neighbor saw me going into the office of a professional who deals with mental health concerns.	.80
9. Important people in my life would think less of my child if they were to find out that he/she had a psychological or behavior problem.	.70
2. I would not want others (friends, family, teachers, etc.) to know if my child had a psychological or behavior problem.	.66
21. Had my child received treatment for a psychological or behavior problem, I would feel that it ought to be “kept secret”.	.50
5. Having been mentally ill carries with it feelings of shame.	.41

Table B3 *Continued*

Scales (α)	Factor Loadings
Help-Seeking Attitudes (.88)	
25. Seeking professional help is a sign of weakness.	.89
23. People should workout their own problems instead of getting professional help.	.76
26. Strong willed parents can handle problems without professional help.	.81
10. Psychological problems tend to work out by themselves.	.58
19. Strong willed individuals can handle emotional or behavior problems without needing professional help.	.62
3. To avoid thinking about my child's problems, doing other activities is a good solution.	.50
16. There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without seeking professional help.	.46
24. There are things that happen in my family I would not discuss with anyone.	.37

Table B4 *Internal Consistency for the PATPSI subscales by Ethnic Groups*

	Ethnic Group			
	European American	African American	Hispanic American	Asian American
Subscale				
PATPSI total	0.90	0.90	0.91	0.92
HS Intentions	0.70	0.70	0.72	0.65
HS Attitudes	0.91	0.86	0.85	0.84
Stigmatization	0.85	0.91	0.87	0.90

Note. HS = help-seeking

Table B5 *Means and Standard Deviations of Participants Rating on the PATPSI by Previous Service Use*

	Previous Service Use			
	Yes (n = 43)		No (n = 217)	
Variable	*M*	*SD*	*M*	*SD*
HS Intentions	19.77_{a}	4.49	18.53_{a}	4.77
HS Attitudes	24.84_{a}	11.36	19.04_{b}	10.50
Stigmatization	25.91_{a}	10.33	18.63_{b}	11.14

Note. HS Intentions was measured using the PATPSI Help-Seeking Intentions scale (higher = more likely to seek help); HS Attitudes was measured using the PATPSI Help-Seeking Attitudes scale (higher = more positive attitudes); Stigmatization was measured using the PATPSI Stigmatization scale (higher = more tolerant of stigma). Means in the same row sharing the same subscripts are not significantly different at $p < .001$.

Table B6 *Study 2 Means and Standard Deviations of Participants Rating on the PATPSI by Ethnic Group*

	Ethnic Group							
	African American (n = 84)		European American (n = 114)		Hispanic American (n = 40)		Asian American (n = 15)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
HS Intentions	19.61_a	4.65	18.18_a	4.82	19.20_a	4.85	18.40_a	3.50
HS Attitudes	16.62_a	10.12	20.90_b	11.44	23.43_b	10.28	24.93_b	7.38
Stigmatization	13.64_a	11.88	22.39_b	9.65	24.28_b	11.00	23.20_b	8.50

Note. HS Intentions was measured using the PATPSI Help-Seeking Intentions scale (higher = more likely to seek help); HS Attitudes was measured using the PATPSI Help-Seeking Attitudes scale (higher = more positive attitudes); Stigmatization was measured using the PATPSI Stigmatization scale (higher = more tolerant of stigma). Means in the same row sharing the same subscripts are not significantly different at $p < .001$.

Table B7 *Summary of Hierarchical Regression Analyses for Hypothesis 2e*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	18.06	.42	
	Attitudes	.14	.03	.33*
	ETH1	2.00	.66	.21*
	ETH2	.48	.83	.04
Step 2				
	Intercept	18.00	.41	
	Attitudes	.20	.04	.47*
	ETH1	2.00	.65	.16*
	ETH2	.08	.83	.01
	ATT X ETH1	-.23	.06	-.30*
	ATT X ETH2	.06	.07	.05

Note. R^2 = .12 for Step; ΔR^2 = .07 for Step 2 (p <.05); ATT = Attitude, ETH1 = African Americans, ETH2 = Hispanic Americans. * p <.001

Table B8 *Summary of Hierarchical Regression Analyses for Hypothesis 2f*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	18.13	.45	
	Stigma	.04	.03	.09
	ETH1	1.76	.73	.18**
	ETH2	.73	.88	.06
Step 2				
	Intercept	18.16	.45	
	Stigma	.02	.05	.05
	ETH1	1.42	.73	.14**
	ETH2	-.13	.94	-.01
	STI X ETH1	-.04	.06	-.06
	STI X ETH2	.19	.08	.19**

Note. R^2 = .03 for Step; ΔR^2 = .03 for Step 2 (p <.05); STI = Stigma, ETH1 = African Americans, ETH2 = Hispanic Americans. ** p <.05.

Table B9 *Summary of Hierarchical Regression Analyses for Hypothesis 2g*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	18.50	.44	
	Attitude	.12	.03	.29*
	GEN	.67	.60	.07
Step 2				
	Intercept	18.52	.44	
	Attitude	.16	.04	.36*
	GEN	.67	.60	.07
	ATT X GEN	-.06	.06	-.10

Note. $R^2 = .09$ for Step; $\Delta R^2 = .00$ for Step 2 ($p = .29$); ATT = Attitude, GEN = Child Gender (male). * $p < .001$.

Table B10 *Summary of Regression Analyses for Exploratory Analysis 2h*

Variable	B	SE B	B	*t*
Intercept	.48	.89		
Past Service Use	.60	.77	.05	.79
Ethnicity	-.54	.35	-.10	-1.54
Gender	-.80	.56	-.09	-1.43
Stigma	-.12	.04	-.28	-3.30*
Attitudes	.21	.04	.49	6.00*

Note. * $p < .001$

Table B11 *Summary of Regression Analyses for Exploratory Analysis 3e*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	3.91	.21	
	SDQin	-.04	.05	-.09
	SDQex	.05	.03	.20
Step 2				
	Intercept	3.83	.26	
	SDQin	-.06	.12	-.13
	SDQex	.08	.05	.30
	SDQin X GEN	.02	.13	.04
	SDQex X GEN	-.04	.07	-.11

Note. R^2 = .03 for Step; ΔR^2 = .00 for Step 2 (p = .82); SDQin = internalizing symptoms, SDQex = externalizing symptoms, GEN = gender.

Table B12 *Study 3 Means and Standard Deviations of Participants Ratings by Ethnic Group*

	Ethnic Group							
	African American (n =18)		European American (n =60)		Hispanic American (n =24)		Asian American (n =15)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Service Use	3.67_{a}	1.61	4.35_{b}	.88	3.96_{ab}	1.52	3.67_{a}	1.21
HS Attitudes	29.83_{a}	6.77	30.37_{a}	6.45	24.71_{a}	6.72	24.93_{b}	7.38
Stigmatization	33.00_{a}	4.55	27.27_{b}	8.17	30.54_{ab}	6.02	23.20_{b}	8.50

Note. Service Use was measured using a Likert-type question on likelihood of future use (higher = more likely); HS Attitudes was measured using the PATPSI Help-Seeking Attitudes scale (higher = more positive attitudes); Stigmatization was measured using the PATPSI Stigmatization scale (higher = more tolerant of stigma). Means in the same row sharing the same subscripts are not significantly different at $p < .05$.

Table B13 *Summary of Hierarchical Regression Analyses for Hypothesis 3g*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	3.62	.23	
	Attitudes	.07	.02	.37*
	ETH1	-.67	.30	-.20*
	ETH2	-.41	.27	-.14
Step 2				
	Intercept	3.62	.28	
	Attitudes	.07	.02	.37*
	ETH1	-.68	.56	-.21
	ETH2	-.43	.51	-.15
	ATT X ETH1	.003	.05	.01
	ATT X ETH2	.002	.04	.01

Note. R^2 = .19 for Step; ΔR^2 = .00 for Step 2 (p = .99); ATT = Attitude, ETH1 = African Americans, ETH2 = Hispanic Americans. * p <.0001.

Table B14 *Summary of Hierarchical Regression Analyses for Hypothesis 3h*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	4.15	.20	
	Stigma	.03	.02	.16
	ETH1	-.83	.34	-.26**
	ETH2	-.53	.30	-.18
Step 2				
	Intercept	4.10	.21	
	Stigma	.04	.02	.24**
	ETH1	.98	.91	.31
	ETH2	-.36	.57	-.13
	STI X ETH1	-.14	.07	-.64**
	STI X ETH2	-.02	.05	-.09

Note. $R^2 = .08$ for Step; $\Delta R^2 = .04$ for Step 2 ($p < .10$); STI = Stigma, ETH1 = African Americans, ETH2 = Hispanic Americans. ** $p < .05$.

Table B15 *Summary of Hierarchical Regression Analyses for Hypothesis 3i*

Variable		*B*	*SE B*	β
Step 1				
	Intercept	3.40	.26	
	Attitude	.07	.02	.37*
	GEN	.03	.23	.01
Step 2				
	Intercept	3.20	.34	
	Attitude	.09	.03	.49*
	GEN	.43	.44	.17
	ATT X GEN	-.04	.04	-.22

Note. R^2 = .14 for Step 1; ΔR^2 = .01 for Step 2 (p = .28); ATT = Attitude, GEN = Child Gender (male). * p <.001

Table B16 *Summary of Regression Analyses for Hypothesis 3j*

Variable	B	SE B	B	*t*
Intercept	3.23	.46		
Past Service Use	.87	.30	.33	2.92*
Ethnicity	.13	.19	.07	.72
Gender	-.08	.25	-.03	-.33
Stigma	-.02	.02	-.11	-1.10
Attitudes	.07	.02	.36	3.62*
SDQin	.16	.18	.34	.88
SDQex	.27	.15	.98	1.77
SDQin X GEN	-.19	.24	-.32	-.79
SDQex X GEN	-.30	.20	-.80	-1.49

Note. SDQ = total symptom level, SDQin = internalizing symptoms,

SDQex = externalizing symptoms, GEN = gender. * p = .002.

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